DOCUMENT RESUME

ED 118 299	RC 008 973

AUTHOR	Whittington, Marna C.; Benson, Stephen D.
TITLE	Identification of Barriers and Proposed Solutions to the Attainment of Equal Representation in Post-Secondary Allied Health Programs for Minorities. Final Report.
INSTITUTION	Associates for Research in Behavior, Inc., Philadelphia, Pa. Science Center.; New England Hospital Assembly, Inc., Durham, Mass.
SPONS AGENCY	Health Resources Administration (DHEW/PHS), Bethesda, Md. Bureau of Health Manpower.
REPORT NO	NO1-AH-34065
PUB DATE	Sep 75
NOTE	217p.
EDRS PRICE	MF-$0.83 HC-$11.37 Plus Postage
DESCRIPTORS	Administrator Attitudes; American Indians; Annotated Bibliographies; *Career Education; *Educational Assessment; Educational Problems; *Health Occupations; Literature Reviews; *Minority Groups; Negroes; *Post Secondary Education; Spanish Americans; Student Attitudes
IDENTIFIERS	*United States (Northeast)

ABSTRACT

The study identified the barriers which prevent application, matriculation, and/or completion of allied health postsecondary education programs by blacks, Spanish-surnamed Americans, and Native Americans and recommended means of reducing or eliminating the barriers. Only those barriers which could be resolved or reduced through programs of public information, outreach, and training were identified. The study was limited to the Northeastern states of Maine, Rhode Island, Vermont, New Hampshire, Massachusetts, Connecticut, and New York. Focus group sessions were conducted with 6 groups of students presently enrolled in programs of allied health, 6 groups of faculty, staff, and administrators of postsecondary allied health programs, and 1 group of minority professionals working in allied health. The discussions were analyzed in 2 ways: (1) objective analysis of barriers as stated in discussion and (2) content analysis of underlying thoughts and feelings. Findings indicated that: (1) most minority students did not include the allied health fields in their career selection process because they had no knowledge or inadequate knowledge of the career opportunities available; and (2) those who did enter postsecondary programs found the academic work difficult, sensed a feeling of social isolation, and seemed unable to find or get the supportive services needed to successfully deal with their environment. (Author/NQ)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

rec 13-02-76

Identification of Barriers and Proposed Solutions to the Attainment of Equal Representation in Post-Secondary Allied Health Programs for Minorities

contract no. 1-AH-34065

ED118299

FINAL REPORT

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: RC UD
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view. HE CE

conducted jointly by:
New England Hospital Assembly Incorporated
Office of Health Care Education
New England Center Administration Building
Durham, New Hampshire 03824
and
Associates for Research in Behavior, Inc.
The Science Center
3401 Market Street
Philadelphia, Pennsylvania 19104

RC008973

IDENTIFICATION OF BARRIERS AND PROPOSED SOLUTIONS TO THE ATTAINMENT OF EQUAL REPRESENTATION IN POST-SECONDARY ALLIED HEALTH PROGRAMS FOR MINORITIES

Project Director:

James S. Dolph, NEHA

Principal Investigators and Authors:

Marna C. Whittington, ARB and Stephen D. Benson, ARB

New England Hospital Assembly Incorporated
Office of Health Care Education
New England Center Administration Building
Durham, New Hampshire 03824

Associates for Research in Behavior, Inc.
The Science Center
3401 Market Street
Philadelphia, Pennsylvania 19104

FINAL REPORT
CONTRACT # NO 1-AH-34065

Supported by:

Division of Associated Health Professions
Bureau of Health Manpower Education
Health Resources Administration
Department of Health, Education and Welfare
Public Health Service
Bethesda, Maryland 20014

September 1975

TABLE OF CONTENTS

Page

ACKNOWLEDGEMENT

EXECUTIVE SUMMARY

1.0 INTRODUCTION 1

- 1.1 Goals and Objectives 1
- 1.2 Allied Health Training 3
- 1.3 Minority Population Distribution 3

2.0 THEORETICAL BASIS 12

- 2.1 Overview 12
- 2.2 Determination of Potential Barriers 13

3.0 COLLECTION METHODOLOGY 24

- 3.1 Design of Collection Instruments 24
- 3.2 Pre-test of Collection Instruments 26
- 3.3 Design of Sampling Plan 29

4.0 FINAL DATA COLLECTION METHODOLOGY 30

- 4.1 Overview 30
- 4.2 Description of the Focus Group Technique 30
- 4.3 Implementation of Methodology 32

5.0 AN OBJECTIVE ANALYSIS OF GROUP DISCUSSION ABOUT BARRIERS 35

- 5.1 Overview 35
- 5.2 Data Analysis 35
- 5.3 Discussion of the Focus Group Data 41

6.0 A QUANTITATIVE ANALYSIS OF GROUP DISCUSSIONS ABOUT BARRIERS TO MINORITIES ENTERING THE ALLIED HEALTH FIELDS 45

- 6.1 Overview 45
- 6.2 Background to Analytic Method 45
- 6.3 Preliminary Approach 47
- 6.4 Study Method 48
- 6.5 Description of the Data 51
- 6.6 Data Analysis 52
- 6.7 Results 69
- 6.8 General Applicability of ACA 85
- 6.9 Comparison with Preliminary Study Results 88
- 6.10 Implications and Conclusions 91

7.0 CONCLUSIONS AND IMPLICATIONS 94

References 99

Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

LIST OF TABLES

Page

TABLE 1 -- MINORITY POPULATION DISTRIBUTION BY STATE 4

TABLE 2 -- MINORITY CONCENTRATION - STANDARD METROPOLITAN STATISTICAL AREAS (SMSA) 5

TABLE 3 -- RACIAL AND ETHNIC ENROLLMENT - INSTITUTIONS OF HIGHER EDUCATION - FALL 1970 7

TABLE 4 -- DETAILED OCCUPATION OF EMPLOYED PERSONS BY RESIDENCE, RACE AND SEX: 1970 8

TABLE 5 -- KEY WORDS USED IN COMPUTERIZED LITERATURE SEARCH 14

TABLE 6 -- TAXONOMY OF BARRIERS 18

TABLE 7 -- FRAMES OF REFERENCE FOR SURVEY RESPONDENTS 25

TABLE 8 -- ALLIED HEALTH OCCUPATIONS REPRESENTED IN THE FOCUS GROUPS 33

TABLE 9 -- SCHOOLS REPRESENTED IN THE FOCUS GROUPS 34

TABLE 10 -- BARRIERS TO APPLICATION 36

TABLE 11 -- BARRIERS TO MATRICULATION 38

TABLE 12 -- BARRIERS TO COMPLETION 39

TABLE 13 -- WORDS AND CATEGORIES USED IN ACA ANALYSIS 50

TABLE 14 -- ALPHABETICAL CATEGORY FREQUENCY 53

TABLE 15 -- PERCENT OF WORDS IN EACH CATEGORY FOR STUDENTS AND FACULTY: FREQUENCY LISTING OF CATEGORIES 56

TABLE 16 -- EIGEN VALUES AND PERCENT OF VARIANCE ACCOUNTED FOR BY EACH FACTOR 60

TABLE 17 -- VARIMAX ROTATED FACTOR MATRIX - 9-FACTOR SOLUTION 62

TABLE 18 -- VARIMAX ROTATED FACTOR MATRIX - 7-FACTOR SOLUTION 63

TABLE 19 -- VARIMAX ROTATED FACTOR MATRIX - 3-FACTOR SOLUTION 64

TABLE 20 -- FACTOR SCORE MATRIX - 3-FACTOR SOLUTION 66

TABLE 21 -- FACTOR SCORE MATRIX - 7-FACTOR SOLUTION 67

TABLE 22 -- SCHEMATIC OF DIMENSIONALIZATION PROCEDURE 70

TABLE 23 -- FACTORS, CATEGORIES AND CATEGORY LOADINGS 72

TABLE 24 -- POTENTIAL BUT UNSUBSTANTIATED ADDITIONAL FACTORS AND CATEGORIES FROM THE 7-FACTOR SOLUTION 84

LIST OF FIGURES

Page

FIGURE 1. ALLIED HEALTH PROFESSIONS INVESTIGATED 2

FIGURE 2. FLOWCHART OF OCCUPATIONAL DECISION MAKING AND IMPLEMENTATION OF DECISION 20

FIGURE 3. BOSTON PRELIMINARY QUESTIONNAIRE 21

FIGURE 4. QUESTIONNAIRE FOR RECRUITING RESPONDENTS FOR PILOT TEST 28

ACKNOWLEDGEMENT

A study of this type and magnitude requires the diligent effort of a great number of people, all of whom deserve an individual plaudit.

The section of the report dealing with the development of the Automatic Concept Analysis technique was authored by Dr. Abraham Wolf and Linda Wiesinger. Statistical consultation for this section was provided by Dr. Shel Feldman. Judy Silberner was responsible for the development of the sample of words used in the analysis.

Our special thanks to Dr. Donald Buckner who supported us throughout the entire project and provided the encouragement to continue in the face of a number of adversities.

Thanks are also due to Lorraine Baugh who helped in the initial development of the project and Mary Gould who was instrumental in setting up the focus groups.

Finally, the study could not have been conducted without the counselors, faculty, active professionals and students who made up the focus groups.

Marna C. Whittington

Stephen D. Benson

EXECUTIVE SUMMARY

Purpose

The purpose of this study was to identify the barriers which prevent application, matriculation and/or successful completion of allied health post-secondary education programs by Black Americans, Spanish surname Americans, and Native Americans and to recommend means of reducing or eliminating the barriers.

Scope

This study was designed to identify only those barriers which could be resolved or reduced through programs of public information, outreach and training, and not those barriers which require widespread national reforms. The study was limited to the Northeastern region of the United States which is comprised of the states of Maine, Rhode Island, Vermont, New Hampshire, Massachusetts, Connecticut and New York. Comparable studies were also conducted in the Southeastern and Southwestern regions.

Methodology

A series of 13 focus group sessions were conducted with:

- Students presently enrolled in programs of allied health (6 groups).
- Faculty, staff and administrators of post-secondary allied health programs (6 groups).
- Minority professionals working in allied health (1 group).

A comprehensive description of the Focus Group Methodology is presented in Section 4.2. A complete description of the individuals comprising the groups is presented in Section 4.3.

The focus group discussions about barriers were analyzed in two ways:

- Objective analysis of barriers as stated in discussion.
- Content analysis of underlying thoughts and feelings.

A discussion of the methodology and results from the objective analysis are presented in Section 5.0. A complete description and the results of the content analysis are presented in Section 6.0.

Results and Recommendations

Results of the study indicate that most minority students do not include the allied health fields in their career selection process because they have no knowledge or inadequate knowledge of the career opportunities available. The few minority students that do enter post-secondary programs find the academic work difficult, sense a feeling of social isolation and seem unable to find or get the ancillary supportive services they need to successfully deal with their environment. Furthermore, the faculty and staff perceived the students' problems as essentially statistical and goal oriented, i.e., they perceived the problems in terms of numbers of students who can be enrolled and graduated.

This study recommended:

- The development of an educational program designed to familiarize junior high students with the career opportunities in the allied health fields and the entrance requirements of post-secondary allied health programs.
- The development of a mechanism for translating the entrance requirements and course content of allied health programs into secondary school educational program content so that more students will be prepared to enter post-secondary programs.
- The development of a program to sensitize the faculty, staff, and counselors to the perceived needs of the students, i.e., the faculty should be reoriented to the now, practical problems perceived by the students.
- The development of a comprehensive information and support system for minority students entering and enrolled in post-secondary allied health programs.

A complete discussion of Conclusions and Implications is presented in Section 7.0.

1.0 INTRODUCTION

1.1 Goals and Objectives

This study was designed to identify the barriers which prevent application, matriculation and successful completion of allied health post-secondary education programs by Black Americans, Spanish surname Americans, and Native Americans and to recommend means of reducing or eliminating these barriers. The ultimate objective of the program was to facilitate the attainment of equal representation by minority group members in allied health fields. This study was limited to the Northeastern region of the United States which is comprised of the states of Maine, Rhode Island, Vermont, New Hampshire, Massachusetts, Connecticut and New York. Two other research groups conducted comparable studies in the Southeastern region (Research Triangle Institute) and in the Southwestern region (Southwest Development Corporation).

The project was conducted in three phases:

- Development of methodologies for identifying barriers that limit application to, entry in and completion of post-secondary allied health education programs.
- Implementation of the methodology(s) for the identification of the barriers and evaluation of the relative importance of the barriers.
- Recommendation of approaches for ameliorating barriers.

The first phase of the study included a literature search to collect information regarding barriers and the preparation of statistical profiles of students in post-secondary allied health programs. This phase also included the development and pretest of methodologies for the determination and assessment of barriers to making application, matriculating and successfully completing post-secondary educational programs in the allied health field.

The second phase of the study included the implementation of the methodologies developed during Phase I. Implementation of the methodologies included collection of institutional data from post-secondary programs, the identification of minority students enrolled in these programs and the collection of data related to barriers from a sample of these students.

The third and final phase of the study included the analysis of the data collected and the formulation of recommendations to reduce the barriers that were identified.

During the life of the project a number of situations arose which required all three contractors to significantly alter the procedures and methods associated with the data collection phase. However, since the basic goal of this report is to provide the reader with a set of recommendations for "Attainment of Equal Representation in Post-Secondary Allied Health Education Programs for Minorities", only the methodology used will be discussed in detail.

In order to limit the scope of work and to insure commonality among contractors' data, all contractors were given the same 20 allied health professions to investigate. Figure 1 shows these professions.

FIGURE 1. ALLIED HEALTH PROFESSIONS INVESTIGATED

- Dental Assistant
- Dental Hygienist
- Dental Laboratory Technician
- Dietary Technician
- Dietitian
- Inhalation Therapy Technician
- Medical Laboratory Technician
- Medical Records Librarian (Medical Record Administration)
- Medical Records Technician
- Medical Technologist
- Occupational Therapist
- Occupational Therapy Assistant
- Ophthalmic Assistant
- Optometric Technician
- Optometric Technologist
- Physical Therapist
- Radiologic Technologist
- Sanitarian
- Sanitarian Technician
- X-Ray Technician

1.2 Allied Health Training

Development of allied health programs in the Northeast is extensive. In general, their development follows the pattern of development elsewhere in the United States, however, historically there has been more emphasis on the bachelor level technologist programs. The supply of health care workers in the New England area has been generally better than other sections of the United States. The New England states, for example, have reflected the highest registered nurse/population ratios. This has had an inhibiting effect on the development of lower level educational programs for ancillary personnel in that the overall personnel shortages were not as severe as elsewhere in the country.

In recent years, however, the community colleges, junior colleges and vocational-technical institutes have taken significant steps toward insuring the supply of allied health personnel at all levels. Several new program areas have also emerged, e.g., biomedical engineering at the professional and technical levels, physician assistant programs, emergency technician and the expanding nurse practitioner concept. In the field of dentistry, a previous professional resistance to wide spread use of allied health personnel is changing to a broader acceptance of the "four-handed dentistry" concept, which should provide impetus for more new programs in the region.

The long-range viability of many allied health programs, in light of current proposed Federal funding, is a subject of possible concern but difficult to assess at this time. Potential employment opportunities in the region remain generally good, although there are indications that the market supply of allied health personnel may be expanding to the point where it will equal or perhaps in some locations exceed the demand. Economic conditions affecting the financial and budgetary abilities of hospitals will be a significant element in this regard.

1.3 Minority Population Distribution

Tables 1 and 2 present data on the minority population distribution among the states in the Northeastern region. Table 1 shows the distribution and percentage of population statistics by state. Table 2 indicates the concentration of minorities by Standard Metropolitan Statistical Areas. Both tables are from

TABLE 1 -- MINORITY POPULATION DISTRIBUTION BY STATE (TOTAL AND PERCENTAGE)

Northeastern United States

POPULATION CATEGORY	Connecticut	Massachusetts	Maine	New Hampshire	New York	Rhode Island	Vermont	TOTAL
Negro/Black	181,177 (5.9)	175,817 (3.1)	2,800 (0.3)	2,505 (0.3)	500,834 (4.8)	25,338 (2.7)	761 (0.2)	889,232
Indian	*	4,475 (0.1)	2,195 (0.2)	361 (-)	*	1,390 (0.1)	229 (0.1)	8,650
Japanese	*	4,393 (0.1)	349 (-)	360 (-)	*	629 (0.1)	134 (-)	5,864
Chinese	*	14,012 (0.2)	206 (-)	420 (0.1)	*	1,093 (0.1)	173 (-)	15,904
Filipino	*	0	453 (-)	157 (-)	*	1,761 (0.2)	53 (-)	2,424
Other Includes All	14,074 (0.4)	10,074 (0.2)	770 (0.1)	772 (0.1)	56,022 (0.5)	1,757 (0.2)	427 (0.1)	84,310
White	2,835,958 (93.5)	5,477,624 (96.3)	985,276 (99.3)	733,106 (99.4)	9,785,249 (94.6)	914,757 (96.6)	442,553 (99.6)	20,732,523 (93.5)
TOTAL	3,031,709	5,689,170	992,048	737,681	10,342,105	946,725	444,330	22,183,768

Source: 1970 Census

TABLE 2.

MINORITY CONCENTRATION

STANDARD METROPOLITAN STATISTICAL AREAS (SMSA)

SMSA	Total	White	* Total	Negro/ Black	** Total	Indian	Japanese	Chinese	Filipino	All Other
Albany, Sch., Troy, N.Y.	721,910	695,289	26,621	23,652	2,969	485	403	684	285	1,112
Boston, Ma.	2,753,700	2,602,741	150,959	127,035	23,924	2,132	2,593	12,025	1,393	5,781
Bridgeport, Ct.	389,153	358,089	31,064	23,913	2,151	302	157	196	114	1,382
Bristol, Ct.	65,808	65,025	783	618	165	51	24	16	23	51
Brockton, Ma.	189,820	185,864	3,956	3,260	696	149	102	157	74	214
Buffalo, N.Y.	1,349,211	1,230,787	118,424	108,784	9,640	5,775	708	874	344	1,939
Fall River, Ma., R.I.	149,976	148,762	1,214	512	702	59	64	145	424	192
Fitchburg, Ma.	97,164	94,867	1,297	1,003	294	40	77	33	31	113
Lawrence Hav., Ma., N.H.	232,415	230,339	2,076	1,328	748	137	168	135	42	266
Lewiston, Auburn, Me.	72,474	72,199	275	101	174	44	29	30	24	47
Lowell, Ma.	212,860	211,085	1,775	1,114	661	84	118	197	44	218
Manchester, N.H.	108,461	107,969	492	242	250	43	34	73	12	88
Meriden, Ct.	59,959	54,332	1,627	1,477	150	26	24	4	-	96
Nashua, N.H.	66,458	65,999	459	249	210	32	36	27	14	101
New Bedford, Ma.	152,642	147,765	4,877	3,894	983	161	95	115	45	567
New Britain, Ct.	145,269	140,676	4,593	3,953	640	73	62	42	51	412
New Haven, Ct.	355,538	311,908	43,630	41,300	2,330	270	344	501	184	1,031
NewLon., Groton, Nor., Ct.	208,412	199,434	8,978	7,156	1,822	291	150	128	954	299
Norwalk, Ct.	120,099	109,987	10,112	9,610	502	46	107	116	35	198
Pittsfield, Ma.	79,727	78,270	1,457	1,222	235	36	50	43	23	83
Portland, Me.	141,625	140,749	876	507	369	95	32	35	114	93
Pro. Paw. Wars., R.I., Ma.	910,781	884,994	25,787	21,083	4,704	909	565	976	712	1,542
Rochester, N.Y.	882,667	820,520	62,147	57,688	4,459	1,446	451	660	168	1,734
Spr., Chic. Holy, Ma., Ct.	529,922	504,017	25,905	24,153	1,752	258	344	215	131	804
Stamford, Ct.	206,419	190,208	16,211	15,079	1,132	114	113	383	99	423
Syracuse, N.Y.	636,507	608,618	27,889	23,398	4,491	2,458	383	159	200	991
Utica, Rome, N.Y.	340,670	332,094	8,576	7,686	890	249	148	108	58	327
Waterbury, Ct.	208,956	196,718	12,238	11,554	684	159	57	67	81	320
Worcester, Ma.	344,320	339,457	4,863	3,665	1,198	249	175	207	92	475

Source: General Population Characteristics - 1970 Census

* Total excludes White
** Total excludes Negro/Black

the 1970 census data. It is obvious from the tables that with the exception of Indians in the states of Maine and New York, the minorities are concentrated in the major urban population centers. Table 3 shows the racial and ethnic enrollment and percentage of enrollment statistics for institutions of higher education in the Northeastern region. This data indicates that there are very few minority students enrolled at the graduate or undergraduate levels in the Northeastern states with the exception of the state of New York. Since this study was concerned with only those minority students enrolled in 20 specific post-secondary allied health programs, the total population eligible for participation in the study was extremely small.

A comprehensive statistical profile of minority students in two and four year colleges in the Northeastern region was developed as a required product of this study. This profile was previously submitted to the National Institutes of Health and is also included in this document as part of Appendix A.

Table 4 shows the number of Black Americans and Spanish surname Americans presently employed in specific health occupations by state in the Northeastern region. These data are from the 1970 census data, consequently, the occupational categories are not totally congruent with those of interest in this study. However, this table does provide a good indication of the low level of minority participation in the allied health fields. In fact, in the states of New Hampshire and Vermont, no Black Americans were reported as working in the occupational categories listed.

TABLE 3
RACIAL AND ETHNIC ENROLLMENT
INSTITUTIONS OF HIGHER EDUCATION - FALL 1970
Northeastern Region of the United States

STATE	CATEGORY	AMERICAN INDIAN	%	NEGRO/ BLACK	%	ORIENTAL	%	SPANISH SURNAME	%	MINORITY	%	OTHER	%	TOTAL	%
Conn.	Undergrad	57	.1	2,036	3.6	120	.2	495	.9	2,708	4.8	53,558	95.2	56,266	100.0
	Graduate	4	.1	237	8.0	60	2.0	27	.9	328	11.1	2,622	88.9	2,950	100.0
	Total	61	.1	2,273	3.8	180	.3	522	.9	3,036	5.1	56,180	94.9	59,216	100.0
Maine	Undergrad	50	.2	186	.8	55	.2	36	.2	327	1.4	22,637	98.6	22,964	100.0
	Graduate			3	.3	1	.1	3	.3	7	.8	891	99.2	898	100.0
	Total	50	.2	189	.8	56	.2	39	.2	334	1.4	25,528	98.6	23,862	100.0
Mass.	Undergrad	192	.1	5,080	3.1	1,266	.8	993	.6	7,531	4.5	158,819	95.5	166,350	100.0
	Graduate	45	.2	920	3.3	214	.8	199	.7	1,378	4.9	26,714	95.1	28,092	100.0
	Total	237	.1	6,000	3.1	1,480	.8	1,192	.6	8,909	4.6	185,533	95.4	194,442	100.0
N.H.	Undergrad	36	.1	400	1.7	45	.2	96	.4	577	2.4	23,613	97.6	24,190	100.0
	Graduate			13	1.1	4	.3	2	.2	19	1.6	1,138	98.4	1,157	100.0
	Total	36	.1	413	1.6	49	.2	98	.4	596	2.4	24,751	97.6	25,347	100.0
N.Y.	Undergrad	1,221	.3	24,758	5.8	4,516	1.1	9,231	2.2	39,726	9.4	384,055	90.6	423,781	100.0
	Graduate	157	.3	1,788	3.5	563	1.9	585	1.1	3,493	6.7	48,274	93.3	51,767	100.0
	Total	1,378	.3	26,546	5.6	5,479	1.2	5,816	2.1	43,219	9.1	432,329	90.9	475,548	100.0
R.I.	Undergrad	88	.3	771	2.9	124	.5	98	.4	1,081	4.1	25,155	95.9	26,236	100.0
	Graduate	1	.1	9	.7	15	1.1	14	1.0	39	2.9	1,302	97.1	1,341	100.0
	Total	89	.3	780	2.8	139	.5	112	.4	1,120	4.1	26,457	95.9	27,577	100.0
Vt.	Undergrad	42	.2	209	1.2	32	.2	87	.5	370	2.2	16,630	97.3	17,000	100.0
	Graduate			12	1.2	15	1.5	7	.7	34	3.4	978	96.6	1,012	100.0
	Total	42	.2	221	1.2	47	.3	94	.5	404	2.2	17,608	97.8	18,012	100.0

Note: New York includes N.Y.C.
Source: Racial and Ethnic Enrollment Data From Institutions of Higher Education, Fall 1970
U.S. Department of Health, Education, and Welfare/Office for Civil Rights

TABLE 4 -- DETAILED OCCUPATION OF EMPLOYED PERSONS BY RESIDENCE, RACE, AND SEX: 1970

	The State											
					Persons of Spanish Language		Urban and Rural Residence					
	Total		Negro/Black				Urban		Rural No Farm		Rural Farm	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
CONNECTICUT												
Dietitians	38	620	8	89	5	-	33	504	5	116	-	-
Health technologists and technicians	1 064	3 569	57	197	7	42	832	2 940	224	629	8	-
Clinical laboratory technologists and technicians	362	1 306	18	81	7	17	277	1 084	82	222	3	-
Dental hygienists	43	645	-	6	-	-	33	499	10	146	-	-
Health record technologists and technicians	14	172	-	7	-	-	10	121	4	51	-	-
Radiologic technologists and technicians	213	779	27	12	-	5	173	698	35	81	5	-
Therapy assistants	13	34	-	-	-	15	13	22	-	12	-	-
Health technologists and technicians, n.e.c.	419	633	12	91	-	5	326	516	93	117	-	-
Dental assistants	21	1 310	-	-	-	-	21	1 032	-	274	-	4
Opticians, and lens grinders and polishers	438	134	-	-	8	4	342	94	90	40	6	-
MAINE												
Dietitians	25	192	-	-	-	-	25	131	-	61	-	-
Health technologists and technicians	197	897	-	6	-	19	101	628	96	264	-	5
Clinical laboratory technologists and technicians	97	411	-	6	-	7	58	279	39	132	-	-
Dental hygienists	-	101	-	-	-	-	-	76	-	25	-	-
Health record technologists and technicians	-	48	-	-	-	-	-	22	-	21	-	5
Radiologic technologists and technicians	42	222	-	-	-	-	22	172	20	50	-	-
Therapy assistants	-	6	-	-	-	-	-	6	-	-	-	-
Health technologists and technicians, n.e.c.	58	109	-	-	-	12	21	73	37	36	-	-
Dental assistants	-	247	-	5	-	-	-	188	-	53	-	6
Opticians, and lens grinders and polishers	23	12	-	-	-	-	23	12	-	-	-	-

(Cont'd)

TABLE 4 -- DETAILED OCCUPATION OF EMPLOYED PERSONS BY RESIDENCE, RACE AND SEX: 1970 (CONT'D)

	The State											
							Urban and Rural Residence					
	Total		Negro/Black		Persons of Spanish Langugage		Urban		Rural No Farm		Rural Farm	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
MASSACHUSETTS												
Dietitians	82	1 307	21	108	-	7	66	1 170	16	137	-	-
Health technologists and technicians	2 720	6 966	147	181	22	52	2 451	6 156	269	810	-	-
Clinical laboratory technologists and technicians	1 125	3 112	76	104	-	31	1 023	2 745	102	367	-	-
Dental hygienists	69	1 003	-	-	-	2	65	849	4	154	-	-
Health record technologists and technicians	23	385	-	4	-	8	23	330	-	55	-	-
Radiologic technologists and technicians	456	1 238	11	19	-	-	393	1 128	63	110	-	-
Therapy assistants	36	69	-	-	-	-	24	64	12	5	-	-
Health technologists and technicians, n.e.c.	1 011	1 159	60	54	22	11	923	1 040	88	119	-	-
Dental assistants	35	3 104	10	22	-	5	26	2 738	9	357	-	9
Opticians, and lens grinders and polishers	1 025	371	9	16	4	4	836	296	189	75	-	-
NEW HAMPSHIRE												
Dietitians	5	193	-	-	-	-	5	111	-	82	-	-
Health technologists and technicians	236	531	-	-	-	-	155	318	81	203	-	10
Clinical laboratory technologists and technicians	85	230	-	-	-	-	56	136	29	89	-	5
Dental hygienists	15	107	-	-	-	-	15	53	-	54	-	-
Health record technologists and technicians	-	19	-	-	-	-	-	15	-	4	-	-
Radiologic technologists and technicians	44	108	-	-	-	-	31	83	13	25	-	-
Therapy assistants	-	-	-	-	-	-	-	-	-	-	-	-
Health technologists and technicians n.e.c.	92	67	-	-	-	-	53	31	39	31	-	5
Dental assistants	-	277	-	-	-	-	-	182	-	95	-	-
Opticians, and lens grinders and polishers	194	68	5	-	-	-	113	18	75	50	6	-

(Cont'd)

TABLE 4: DETAILED OCCUPATION OF EMPLOYED PERSONS BY RESIDENCE, RACE AND SEX: 1970 (CONT'D)

	The State											
					Persons of Spanish Langugage		Urban and Rural Residence					
	Total		Negro/Black				Urban		Rural No Farm		Rural Farm	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NEW YORK												
Dietitians	391	3 614	194	1 132	45	110	370	3 304	15	280	6	30
Health technologists and technicians	8 367	16 493	1 687	2 387	434	416	7 609	14 606	741	1 801	17	86
Clinical laboratory technologists and technicians	3 612	7 644	796	1 220	192	200	3 330	6 895	277	719	5	30
Dental hygienists	66	2 176	11	37	-	13	56	1 766	5	390	5	20
Health record technologists and technicians	147	918	27	100	-	15	137	818	10	100	-	-
Radiologic technologists and technicians	2 036	2 616	430	359	169	101	1 818	2 342	218	260	-	14
Therapy assistants	127	150	36	17	16	-	127	140	-	10	-	-
Health technologists and technicians, n.e.c.	2 379	2 989	387	654	57	87	2 141	2 645	231	322	7	22
Dental assistants	250	8 193	32	425	24	294	236	7 302	14	837	-	54
Opticians, and lens grinders and polishers	2 958	705	174	138	99	11	2 694	640	253	57	11	8
RHODE ISLAND												
Dietitians	6	179	-	15	-	-	6	145	-	34	-	-
Health technologists and technicians	392	972	3	13	-	28	350	870	42	97	-	5
Clinical laboratory technologists and technicians	150	418	-	9	-	-	130	380	20	33	-	5
Dental hygienists	5	86	-	-	-	-	5	70	-	16	-	-
Health record technologists and technicians	6	66	-	-	-	13	6	60	-	6	-	-
Radiologic technologists and technicians	88	221	-	-	-	-	78	205	10	16	-	-
Therapy assistants	4	4	-	-	-	-	4	4	-	-	-	-
Health technologists and technicians n.e.c.	139	177	3	4	-	15	127	151	12	26	-	-
Dental assistants	12	364	-	-	-	-	12	333	-	31	-	-
Opticians, and lens grinders and polishers	107	100	-	-	-	-	93	100	14	-	-	-

(Cont'd)

TABLE 4: DETAILED OCCUPATION OF EMPLOYED PERSONS BY RESIDENCE, RACE AND SEX: 1970 (CONT'D)

	The State											
							Urban and Rural Residence					
	Total		Negro/Black		Persons of Spanish Language		Urban		Rural No Farm		Rural Farm	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
VERMONT												
Dietitians	8	93	-	-	-	9	4	22	4	67	-	4
Health technologists and technicians	194	433	-	-	-	-	121	199	73	220	-	14
Clinical laboratory technologists and technicians	35	197	-	-	-	-	30	83	5	108	-	6
Dental hygienists	3	52	-	-	-	-	3	23	-	21	-	8
Health record technologists and technicians	9	31	-	-	-	-	-	15	9	16	-	-
Radiologic technologists and technicians	46	79	-	-	-	-	25	49	21	30	-	-
Therapy assistants	6	-	-	-	-	-	6	-	-	-	-	-
Health technologists and technicians, n.e.c.	95	74	-	-	-	-	57	29	38	45	-	-
Dental assistants	8	167	-	-	-	-	8	77	-	77	-	13
Opticians, and lens grinders and polishers	78	28	-	-	-	-	46	10	32	18	-	-

Source: 1970 Census

2.0 THEORETICAL BASIS

2.1 Overview

The operational definition of barriers set forth in the Request for Proposal (RFP) differentiated between those barriers which are resolved or reduced through programs of public information, outreach and training, versus those barriers which require widespread national reforms. This distinction between types of barriers was acknowledged and efforts were directed toward determining those barriers which could be resolved or reduced through programs geared specifically to increasing the minority group participation in allied health education. Those requiring national reforms were outside the scope of this project.

Crossland (1971) set the tenor for isolating and defining potential barriers which limit representation in post secondary educational institutions by describing the barriers as "varied, complex, interrelated, reinforcing and rooted in tradition." In order to understand and measure these diverse and complex barriers, it was first necessary to enumerate all the potential barriers that might exist. These barriers were preliminarily formulated from two sources:

- The research team's on-going and previous work on training and transition to work of minority students in both allied health and other fields.
- An extensive literature search of available articles, books and dissertations.

The second and more difficult task was to determine the possible relations and interrelations among the potential barriers and then to determine how they impacted on the process of application, matriculation and completion of a post secondary allied health program.

2.2 Determination of Potential Barriers

The development of the comprehensive list of potential barriers was accomplished in two ways:

- NEHA and Associates conducted an extensive literature search of available articles, books, dissertations, research programs and statistical compilations.
- Data collected from Associates' on-going and previous research on the problems of transition to work was thoroughly analyzed.

The literature search was conducted in two ways:

- Use of computerized search services
- Manual search conducted by research staff

In order to access all the potentially relevant literatures, a comprehensive list of key words had to be developed for the computerized literature search services. This list is included as Table 5. There is a great deal of redundancy in the key words in order to insure accessing all literature of potential interest. This list was used for computerized searches at the following facilities:

- New England Regional Search Center
- Institution for Educational Services, Inc.
- National Clearing House for Mental Health Information
- Psychological Abstracts Search and Retrieval

The New England Regional Search Center (MEDLARS) is located at the Francis A. Countway Library of Medicine which is the regional medical library for New England. The MEDLARS data base contains all journal articles indexed for Index Medicus, Index to Dental Literature and International Nursing Index. The data base was searched for publications from January, 1964 to August, 1973, and yielded 3,386 citations. From the 3,386 citations retrieved, 55 titles

TABLE 5 -- KEY WORDS USED IN COMPUTERIZED LITERATURE SEARCH

1. Ability
2. Achievement
3. Achievement Motivation
4. Achievement/Academic
5. Achievement/Academic - College
6. Achievement/Prediction of Academic
7. Alienation
8. Anxiety
9. Aspiration and Aspiration Level
10. Attitude
11. Attitude/Student
12. Bias
13. Competition
14. Conflict
15. Counseling
16. Cross Cultural Differences
17. Culture
18. Defense Mechanism
19. Discrimination
20. Discrimination Reversal
21. Education/Special - Remedial
22. Educational Background
23. Ethnology
24. Guidance/Educational
25. Guidance/Vocational
26. Identification
27. Identity
28. Individual Differences
29. Integration
30. Motivation
31. Need
32. Negro
33. Occupational Choice
34. Peers
35. Prejudice
36. Retention
37. School Adjustment
38. School Dropout
39. Self
40. Self Concept
41. Self Perception
42. Social Interaction
43. Social Psychology
44. Student/College - Attitudes
45. Student/College - Personality
46. Test Achievement
47. Race Relations
48. Minority Groups
49. North American Indian
50. Identity Crisis
51. Civil Rights
52. Interpersonal Relations
53. Poverty
54. Attrition

TABLE 5 -- KEY WORDS USED IN COMPUTERIZED LITERATURE SEARCH (CONT'D)

55. Allied Health Training
56. Paramedical Training
57. Race Awareness
58. Ethnic Attitude
59. Obstacles to Education
60. Education and Training
61. Learning and Retention
62. Social Psychology
63. Manpower
64. Race and Ethnic Relations

appeared relevant to the contract. After reviewing these articles, however, only 45 were deemed appropriate for thorough analysis abstraction and inclusion in the bibliography which was to be a deliverable product from this subject. A copy of the bibliography is included as Appendix B.

The Institute for Educational Services, Inc. is the ERIC Retrieval Center for the New England Region. The ERIC data base includes the Current Index to Journals in Education and Research in Education. The ERIC search included all publications from January, 1963 to December, 1973. It yielded 126 citations. After reviewing the 126 documents retrieved, 50 were deemed to have relevance to the project and were thoroughly examined, and submitted as a required deliverable.

The National Clearing House for Mental Health Information data base search yielded 33 references, six of which were applicable to the study. These were used in generating the list of potential barriers, abstracted and included in the bibliography.

The Psychological Abstracts Search and Retrieval data bases includes all documents published in the American Psychological Association abstracts. This search yielded 96 titles of which 23 were used in developing the list of potential barriers and were abstracted and included in the bibliography.

The manual search of books, bibliographic references and materials yielded a high rate of redundancy with the computerized searches. However, 8 additional references were located through the manual search procedure.

The second major source of data for determining potential barriers to minorities was on-going work in transition to work problems facing individuals presently in training or in the traditional educational system who are trying to develop the required vocational skills to enter or re-enter the labor force. Of particular interest for this study is Associates' work with two groups: 1) 7-12 graders who are presently making career selections and 2) trained and untrained disadvantaged individuals (predominantly minorities who are training to enter or re-enter the labor force in fields including the allied health field). These groups provided data on the career decision making process of individuals and their perceived attractions to each career area, their perceived barriers to entry into specific fields and their perceived losses associated with entering each field. It also provided the research team with an understanding of how young people collect information on career areas, what career areas are most often considered as possible career alternatives and why specific areas are selected and/or not selected.

The preliminary formulation of potential barriers from the literature searches and previous work resulted in the development of a Taxonomy of Barriers shown in Table 6. This taxonomy breaks the potential barriers into two categories:

1) Socio-educational, and
2) Psychological.

Socio-educational barriers are either sociological, such as lack of money or educational, such as low SAT scores or poor class standing. Crossland (1972) presents an interesting discussion of the handicap imposed on minority students by standardized tests and test norms.

Psychological barriers are individual or personal barriers resulting from an individual's perception of himself, his group, or his environment. Examples of psychological barriers are lack of confidence or a feeling of discrimination against one's race or culture.

The column headings for Table 6 indicate the three points in the educational process that are relevant in this study, i.e., making application to post secondary allied health education programs, actual matriculation and successful program completion. The "X" in a column indicates that the specified barrier may be relevant to that stage of the educational process.

The simple Taxonomy of Barriers was not sufficient to develop a comprehensive understanding of the relative strengths and interactions of the potential variables influencing an individual's selection of the allied health field. Associates' previous research on the transition to work process has indicated that not only should barriers to the allied health fields be analyzed but also attractions should be considered. Associates' work has shown that net subjective utility of the career area is the most powerful determiner of choices. Furthermore,

TABLE 6 -- TAXONOMY OF BARRIERS

	Application	Matriculation	Completion
1. Socio-Educational			
Scholastic			
Low aptitude scores	X		
Low grade point average	X		X
Wrong preparatory curriculum	X		X
Poor career counseling	X	X	X
Fear of competition in alien environment		X	X
Quota			
Curriculum, structure of program		X	X
Career			
Career stratification	X		
Knowledge of field/careers within field	X		
Awareness of training opportunities	X		
Scholarship availability	X	X	X
Need immediate funds	X	X	X
Social			
Home versus away	X	X	X
Home pressure	X	X	X
Ostricism	X	X	
Social skills	X	X	X
Peer perception of training institution	X	X	X
2. Psychological			
Self concept	X	X	X
Group concept	X	X	X
Career concept	X	X	X
Level of aspiration	X	X	X
Need achievement	X	X	X

net subjective utility is a function of attractions, losses and barriers. Attractions are the perceived benefits associated with selection of the career area; losses are the perceived detriments associated with selection of the career area and barriers are the perceived impediments to successfully achieving the career goal. In simple terms, before a barrier can be an impediment to selection of a career area, there must be both an awareness of and a positive interest toward that career area. If there is no awareness and no positive interest in the career area, the existence or non-existence of barriers will have no influence on its selection or non-selection. The necessity of examining barriers in conjunction with attractions and losses required the development of a comprehensive systems analysis of the career decision making procedure for potential allied health professionals.

The analysis of the decision making process included the actual field or career selection process and all the subsequent steps necessary to apply, matriculate and complete the necessary post-secondary program to follow through with the decision. Figure 2 shows the career decision making process for secondary school students. For people considering a career choice sometime after leaving high school the process is somewhat different. However, this figure can easily be adapted for the re-entry group; box 1 is the major change in the flowchart. Under each of the boxes in the flowchart in Figure 2 are exemplars of the potential attraction, loss or barrier variables associated with that particular box. For example, box 3 asks "Did the student consider an allied health career?" Potential variables affecting selection are high school career counseling, grade point average, high school coursework (as it relates to requirements for an allied health program), degree of interest in the allied health field, the image of the allied health field. These variables all influence an individual's decision to consider an allied health career. All potential variables were enunciated and the flowchart was empirically validated on a series of three focus group sessions held in Boston, Massachusetts, Philadelphia, Pennsylvania and Wilmington, Delaware.

The first focus group was a group of allied health students selected from schools located in Boston. Each student was asked to respond to the questionnaire shown in Figure 3 prior to the beginning of the focus group session. The Boston group was used to validate both the macro aspects of the flowchart, i.e., was the flowchart adequately representing the decision making process, and the micro aspects of the flowchart, i.e., did the variables influence the decision made in each box.

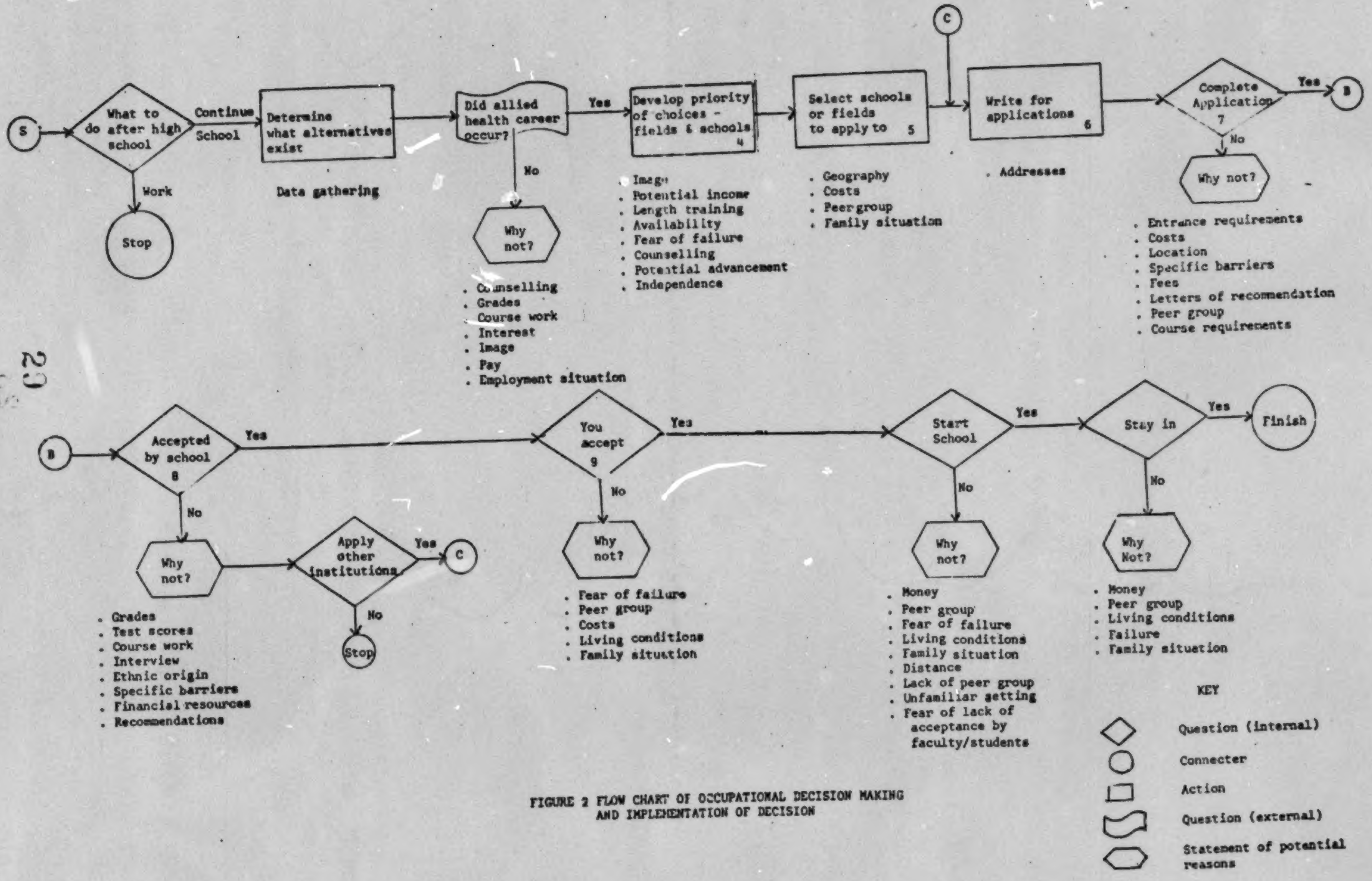

FIGURE 2 FLOW CHART OF OCCUPATIONAL DECISION MAKING AND IMPLEMENTATION OF DECISION

FIGURE 3. BOSTON PRELIMINARY QUESTIONNAIRE

ALLIED HEALTH CAREER STUDY

Name:

Field of Study:

Age ________ Sex _______ Marital Status: _______

Please answer each of the questions below giving a short but complete answer to each.

1. How did you first find out about careers in Allied Health?

2. What made you decide to pursue a career in Allied health?

3. When did you decide to pursue a career in Allied health?

   Did this decision influence the subjects you took in high school?

4. Who helped you most in deciding what to do about your secondary education?

5. Did you have any problems in finding out about schools (to attend) offering programs that you were interested in?

6. Did you have any problem getting accepted to your first or second choice school?

   If yes - What?

The results of the Boston pre-test session indicated that the macro flow shown in the flowchart was an accurate representation of the decision process. However, all the students noted that box 3, i.e., the knowledge of the existence of the allied health field and the subsequent consideration of an allied health career, seemed to be the point in the process where most potentially qualified individuals dropped out. These results stimulated the calling together of a second focus group of 9 allied health students and professionals in Wilmington, Delaware. Both the professionals and students in Wilmington also verified the systems flowchart and the notion that most minority individuals do not realize that the health professions include any careers other than Nurses Aide, Licensed Practical Nurse, Registered Nurse, and Medical Doctor. The majority of the professionals and the students has accidentally discovered the allied health field. The Wilmington group also discussed the attractions, losses and barriers to individuals once they had decided to explore the possibility of an allied health field and concurred with the research team's listing of the attraction, loss and barrier factors.

To try to better understand the overwhelming consensus that "nobody knew allied health fields existed" a third series of focus groups were conducted with minority vocational high school students in Philadelphia. Three groups of students, one consisting of 9 males, one consisting of 9 females, and one consisting of 5 females and 4 males, were recruited from local high schools. The students spanned grades 10-12. All groups of students were asked such questions as:

- Can you name some examples of allied health careers?
- Have you ever considered an allied health career?
- Does your school have any information describing allied health careers?
- Do you know anyone in training for an allied health career?
- Do you know anyone pursuing an allied health career?
- Do you know anyone considering an allied health career?
- Has your counselor ever suggested an allied health career to you?
- How long are post-secondary allied health career training programs?

The answers to all the questions showed universal ignorance of the allied health professions.

The results of these focus groups suggested that the application phase of the application, matriculation, and completion process should be thoroughly investigated with the students to determine how they found out about allied health careers and why they applied.

After the Taxonomy of Barriers was developed and the application, matriculation and completion process was analyzed, the collection methodology was designed.

3.0 COLLECTION METHODOLOGY

3.1 Design of Collection Instruments

The RFP called for data to be collected from two major sources:

- Students presently enrolled in programs of allied health, and
- Faculty, staff and administrators of post-secondary allied health programs.

The RFP also defined the minimal number of respondents and constraints on how the data was to be obtained.

The results of the pilot focus groups and the data found during the literature search were used to generate a listing of all actual or perceived barriers for minority groups in applying, matriculating and/or completing allied health professions post-secondary education programs. These barriers were categorized as either socio-educational or psychological and appropriate response formats were formulated for each category of barrier. Items were developed to measure each respondent's opinion of each of the barriers.

Previous work done by Associates strongly suggested that if an individual's perceived attraction to work or to a specific profession is not at a minimal level, there is no motivation to enter the field. Barriers can have an impact only when a minimal attraction has been achieved. Therefore, it was strongly recommended that part of the data collection methodology contain measurement of attraction to work in the allied health professions.

The RFP limited the student portion of the data collection to those students presently enrolled in allied health education programs. The initial questionnaire, however, was designed to attempt to gain some information about the non-entrants and dropouts from the current enrollees. Table 7 shows the frames of reference that each respondent could assume in answering the questionnaire in order to provide the required data. Block 1 suggests as a frame of reference for the respondent, the period of time during which the student is deciding whether to make application or not. Block 2 requires that

TABLE 7 -- FRAMES OF REFERENCE FOR SURVEY RESPONDENTS

APPLICATION	MATRICULATION	COMPLETION
You, when you applied **(1)**	**You, when you decided to enter** **(3)**	**You, now** **(5)**
Friend who wanted to apply but didn't, or a friend who applied and was not accepted **(2)**	**Friend who was accepted but did not enter** **(4)**	**Friend who was accepted and matriculated but did not complete program** **(6)**

the individual put himself in the position of a friend who did not make application after thinking about it or who applied and was not accepted. Block 3 represents the individual who successfully matriculated. Block 4 requires the respondent to put himself in the position of a friend who applied, was accepted and then did not matriculate. The fifth block is the present attitude of the student. The sixth block requires the respondent to put himself in the position of the student who has matriculated but for any one of a number of reasons is either contemplating dropping out or who has dropped out.

Several other factors not directly related to the data to be collected had to be considered in designing the questionnaire. Some of the parameters that are important in maximizing the cost effectiveness of questionnaires are:

- Time required to answer questionnaire should be limited
- Questionnaire should be sent out via first class mail
- An effective letter of explanation should be sent with the questionnaire as a cover letter
- An appropriate incentive to the respondent should be included
- Follow-up should be conducted for those people not responding to the first mailout

Many aspects of this design had to be deleted when it became apparent that all three contractors were going to have to use an identical data collection format. As a result of a series of meetings among the three contractors, the integration contractor and the contract monitor, two questionnaires were agreed upon. The first was the student questionnaire and the second was the institutional questionnaire. These two items in their final form are presented in Appendix C.

3.2 Pre-test of Collection Instruments

The pre-test sample of the Student Questionnaire included nine students from five different allied health program fields. Seven of the nine students were female. The average age of eight of the students was 23 years, the ninth student was 48. Of the nine, seven were Black American, one was Puerto Rican and one was African.

The nine students for the pre-test were recruited from a neighborhood shopping mall. Professional interviewers from Associates used the selection interview format shown in Figure 4 to recruit the nine minority individuals who were presently enrolled in one of the post-secondary allied health programs of interest. These nine individuals were all asked to respond to the final form of the student questionnaire.

The average time taken by eight of the students to complete the questionnaire was 33 minutes, with the times ranging from 17 to 55 minutes. The student from Africa was not included in this average as she had difficulty with the English language. The interviewer noted that the student needed help in understanding several of the questions.

Students were able to ask questions while they were completing the questionnaire and when finished were asked which, if any, questions gave them problems in answering. Four students indicated having difficulty understanding the ranking of items in question #26.

In answer question #20, six of the nine students checked only one source of information rather than three. "Check the 3 most important" was better emphasized in the final print of the questionnaire.

These preliminary results indicated that a questionnaire of this type could be used to obtain the necessary data after the wording of the problem questions was clarified. These results were replicated by the two other technical contractors in their pilot test of the questionnaire. Appendix C contains a sample of the questionnaire that was used and a summary of the responses from the pilot group.

The institutional questionnaire was pilot tested by the integration contractor and the specific results of that testing will be reported by them.

Once the two questionnaires were agreed upon they were jointly submitted to the contract monitor so that the necessary OMB clearances could be obtained.

FIGURE 4. QUESTIONNAIRE FOR RECRUITING RESPONDENTS FOR PILOT TESTS

Hello, I'm__________from Associates for Research in Behavior. We're making a study of students today.

1. Are you currently enrolled in any of the following types of allied health courses?

    Dental Assistant
    Dental Hygienist
    Dental Laboratory Technician
    Dietary Technician
    Dietitian
    Inhalation Therapy Technician
    Medical Laboratory Technician
    Medical Records Librarian
    (Medical Record Administration)
    Medical Records Technician
    Medical Technologist
    Occupational Therapist
    Occupational Therapy Assistant
    Ophthalmic Assistant
    Optometric Technician
    Optometric Technologist
    Physical Therapist
    Radiologic Technologist
    Sanitarian
    Sanitarian Technician
    X-Ray Technician

3.3 Design of Sampling Plan

The development of the initial sampling plan was extremely critical because of the small number of minority students actually enrolled in post-secondary allied health programs and because of the sample size limitations set forth in the contract. A complex mechanism using the National Urban League was designed to ensure that as high a percentage as possible of minority students presently attending post-secondary allied health training programs be located, thereby increasing the reliability of the sample. Because of the change in data collection plans, this methdology was never tested.

4.0 FINAL DATA COLLECTION METHODOLOGY

4.1 Overview

When it became obvious that the contract could not be completed within the time frame set forth in the contract because of the forms clearance problems, an alternate data collection methodology was proposed to the contract monitor. The alternate methodology required convening a series of focus groups to develop the data base from which a series of meaningful recommendations could be developed. This recommendation for a change in methodology was based on the results obtained during the development of the theoretical base and the original questionnaire design. During these two tasks, a number of different focus groups were initiated to test the theory and to develop items. The quality and quantity of data that was obtained strongly suggested that this technique could provide adequate data. However, one of the shortcomings of this data collection methodology was the necessity for focus groups of no less than six people. This restriction necessitated holding all of the groups in metropolitan centers. Secondly, because of the time frame,(end of the school year) in which the approval was received to conduct the focus groups, the potential sample of individuals was further reduced to those whose schools were still in session. However, there is no evidence to suggest that this restriction biased the results.

4.2 Description of the Focus Group Technique

The focus group technique, also called the group depth interview, is best described by Goldman (1962). Goldman defines the focus group as "a number of interacting individuals having a community of interests... In contrast to the individual interview in which the flow of information is unidirectional, from the respondent to the interviewer, the group setting causes the opinions of each person to be considered in group discussion. Each individual is exposed to the ideas of the others and submits his ideas for the consideration of the group.

The advantages of this method of data collection include the following:

- Interaction among group members stimulates new ideas regarding the topic under discussion that may never have been thought of by the interview group leader (or questionnaire designs).
- The opportunity to observe directly the group process. In interview data (or questionnaire data), respondents tell how they would or did behave in a particular situation. In the group setting, respondents do behave and react to each other's behavior or statements of behavior.
- An idea of the dynamics of the attitudes and opinions -- their initiation, modification, intensity and resistance to change.
- Considerably greater spontaneity and candor than is possible in an individual interview or a questionnaire.
- An emotionally provocative setting which provides more information than can be obtained from the sum of its individual human parts."

In the selection of any data collection methodology, consideration should be given to the validity and reliability of the proposed data collection techniques. Goldman addresses the reliability questions as follows:

"The question of reliability of the sample or generalization of the results, directs attention to the purpose of the group depth interview. Its basic function is to indicate why rather than how many. That is, it focuses on understanding the motives of behavior rather than cataloging the number of individuals who behave in a particular way." Reliability thus becomes a problem of selecting a representative sample or samples of interviewees so that the results can be generalized to the minority population in the northeastern section of the country.

The validity of the focus group method, i.e., does the focus group really measure what it purports to measure, is established because the group situation attempts to get to the actual process in question through various interview techniques such as projective questions, illustrative case method, deprivation questions and stereotype questions.

Focus group sessions are usually led by 1-2 individuals who are trained leaders. The session should include 6-10 interviewees. All sessions are tape recorded and permission to record the session is usually obtained prior to the beginning of the session. All group members are usually paid for their participation plus receive reimbursement for their travel expenses to and from the session.

The most critical factor in conducting a focus group session is the leader. At the beginning of each session the leader should establish the purpose of the session, how long the session will last, and the role of each participant. After establishing rapport with the group, the leader starts the discussion and attempts to make sure that all individuals in the group have an opportunity to participate in the discussion rather than one or two individuals becoming the spokesperson for the group. The leader must also gauge the time spent on any one point in the session to insure that the session covers the most relevant topical areas.

4.3 Implementation of Methodology

The focus group methodology was approved by the contract monitor and student and faculty focus groups were convened as follows:

- 1 student and 1 faculty group in Bridgeport, Connecticut
- 1 student and 1 faculty group in Meriden, Connecticut
- 2 student and 2 faculty groups in New York, New York
- 2 student and 2 faculty groups in Boston, Massachusetts

An additional focus group of minority professionals working in the allied health field was called in Boston. Though this group was outside the scope of the contract, the research team felt that the additional group might add further insight into the existing barriers.

Table 8 shows the allied health professions that were represented at the student and staff groups. The listing at the bottom of the staff column indicates the staff functions that were represented.

Table 9 shows the institutions that were represented at the student and staff focus groups. The diversity of institutions, allied health fields, and staff positions was more than sufficient to insure a heterogeneous sampling. Within the groups there was also a good sampling of age, sex, educational background, socio-economic background and geographic area (within the northeastern region).

TABLE 8 -- ALLIED HEALTH OCCUPATIONS REPRESENTED IN THE FOCUS GROUPS

	Staff	Student
Dental Assistant		
Dental Hygienist	x	x
Dental Laboratory Technician		
Dietary Technician	x	x
Dietitian	x	x
Inhalation Therapy Technician	x	x
Medical Laboratory Technician		x
Medical Records Librarian (Medical Record Administrator)	x	x
Medical Records Technician		
Medical Technologist	x	x
Occupational Therapist	x	x
Occupational Therapy Assistant	x	x
Ophthalmic Assistant		
Optometric Technician	x	
Optometric Technologist	x	
Physical Therapist	x	x
Radiologic Technologist	x	x
Sanitarian		
Sanitarian Technician		x
X-Ray Technician	x	x

Admissions
Dean
Counselor
Recruiter
Faculty
Educational
Coordinator

TABLE 9 -- SCHOOLS REPRESENTED IN THE FOCUS GROOUPS

	Faculty	Student
Connecticut		
University of Bridgeport	X	X
Norwalk Hospital	X	X
Yale New Haven Hospital	X	X
Housatonic Community College	X	
Hartford Hospital	X	X
St. Vincents Hospital	X	
South Central Community College		X
St. Raphael Hospital	X	
Bridgeport Hospital	X	X
University of Connecticut	X	X
Quinnipiac College	X	X
Greater Hartford Community College	X	X
Windham Community Memorial Hospital	X	X
Meriden Wallingford Hospital	X	
Boston		
Simmons College	X	X
Boston University	X	X
Tufts New England Medical Center		X
Veterans Hospital, Boston, Massachusetts	X	X
Boston State College	X	X
Northeastern University	X	X
Suffolk University	X	X
Massachusetts College of Optometry	X	
Massachusetts General Hospital	X	
LaBoure Junior College	X	
New England Medical Center Hospital	X	
Beth Israel Hospital	X	
New York		
New York University	X	X
Bellevue Hospital		X
Montefiore Hospital	X	X
Manhattan College		X
State College of Optometry		X
Hostos College	X	X
Hunter College	X	X
Pace University	X	X
Flower Hospital	X	X
Veterans Hospital Brooklyn	X	
New York City Community College	X	X
LaGuardia Community College		X
Downstate Medical School	X	X
New York City University		X

5.0 AN OBJECTIVE ANALYSIS OF GROUP DISCUSSIONS ABOUT BARRIERS

5.1 Overview

The focus group technique proved to be an effective means for allowing students to discuss both the idiosyncratic and generic attractions, losses and barriers associated with applying, matriculating and/or completing a post-secondary allied health training program. The dialogue across groups was surprisingly consistent. This section will present a listing of all the barriers discussed by the groups and an intensity measure of the barriers.

5.2 Data Analysis

The focus group sessions were all tape recorded. Thus, the "raw" data was approximately 22 hours of tape recorded discussions. After all sessions were completed, the tapes were replayed and analyzed by the research team. Analysis consisted of listing each barrier as it was discussed, tabbing how many times the barrier was mentioned, and recording the approximate amount of time devoted to the discussion of each barrier. In listing the barriers, the application, matriculation and completion stages of the process were considered independently, i.e., when barriers were mentioned, it was important to note in which phase the barrier was important to the discussion.

The results of the analysis of the tapes are shown in Tables 10 - 12. Table 10 is barriers to application, Table 11 is barriers to matriculation, and Table 12 is barriers to completion. Within each table, the barriers are classified as being in more specific categories of academic preparation, social, financial, counseling or psychological/other. Next to each barrier on the tables is a dot (.) under the columns labeled students and staff. If the barrier was mentioned by students, there is a dot in the student column; if the barrier was mentioned by staff, there is a dot in the staff column; if both groups mentioned the barrier, there is a dot in both columns.

To the immediate right of each of the columns labeled "students" and "staff", there is a column labeled intensity. This column indicates the relative number of times a barrier was mentioned. There are three intensity measures ranging

TABLE 10 -- BARRIERS TO APPLICATION

	Students	Intensity	Staff	Intensit
Academic Preparation				
Poor grades (general)	.	1	.	3
Poor grades in high school science courses	.	3	.	3
Lack of appropriate courses			.	3
Lack of necessary high school science courses			.	3
College boards are used for selection	.	2		
High school was not rigorous enough preparation	.	3		
Social promotion system in high school does not prepare student	.	3		
High school oriented toward preparing people for jobs and not for post-secondary education	.	3		
Schools in minority areas are not oriented toward quality education	.	3		
Teachers in minority high schools are poor	.	3	.	3
Required science courses not offered in high school	.	3		
Tracking system used by high schools hard to get out of	.	1		
Entrance criteria for programs not appropriate for older individuals	.	3		
Competition too tough for too few slots			.	2
Community college courses do not adequately prepare you	.	1	.	3
High School Counseling				
Don't receive information in time to take necessary preparatory courses	.	1	.	1
Don't know allied health program exists	.	1	.	1
Counselors don't know requirements for allied health programs	.	2	.	2
Minority students are placed in tracks which do not expose them to allied health careers			.	3
Career days come after career choices are already made			.	3
Good way to get exposure to programs is volunteer work but most minorities have to work for money	.	3		
Counselors don't know that there is financial aid available for allied health programs			.	3
Minorities at all-white high schools have trouble establishing rapport and thus accessing information	.	3		
Students in high school are not aware counselors are uninformed and accept counselor's advice	.	3		
Only male guidance counselors available and they were hard for females to communicate with	.	3		

(Cont'd)

TABLE 10 -- BARRIERS TO APPLICATION (CONT'D)

	Students	Intensity	Staff	Intensity
Social Barriers				
Not enough recruiters from minority groups			•	3
Not enough minority teachers in allied health careers (few role models)			•	3
Great deal of peer pressure not to study in high school	•	3		
Some schools have quota systems, which limit the number of blacks accepted	•	3		
Financial				
Students don't realize there is aid available	•	3	•	3
Decline in hospital based programs for students, so must go to 2-year or 4-year colleges which are more expensive			•	3
Minority heads of household cannot afford not to work and yet usually require extra remedial courses which extend class hours and/or course length			•	3
Students are not informed of the opportunity to take National Merit Exams and thus qualify for assistance			•	3
Most community colleges don't have 4-year programs so you have to go to more expensive private colleges or universities	•	3		

TABLE 11 -- BARRIERS TO MATRICULATION

	Students	Intensity	Staff	Intensit
Academic Preparation				
Lose credits when transfer from community college	.	3		
Financial				
Have to take out too many loans	.	3	.	3
Not enough scholarships available	.	3	.	3
Incoming freshmen don't know what aid they'll get until the end of the summer prior to beginning school			.	3
Difficult to get aid if your parents earn over a certain amount of money	.	3		
Can't get jobs in hospital while in school without hospital experience	.	3		

TABLE 12 -- BARRIERS TO COMPLETION

	Students	Intensity	Staff	Intensity
Academic Preparation				
Science courses too hard	•	1	•	1
Didn't know what they were getting into academically	•	1	•	1
Majority of students are well prepared therefore courses tend to move too rapidly	•	3		
Language problems	•	3	•	3
Heavy time commitment required with both class and clinical work	•	3		
Sometimes have to get GED at same time	•	3		
Don't know how to study, take tests or write papers	•	1		
Problem with written and oral communication	•	1	•	3
High failure rate expected in some programs	•	3	•	3
All class material too difficult	•	2		
Competition is too tough	•	3		
Counseling				
Students don't understand the field they are entering			•	3
Advisors don't help students arrange a course load they can handle	•	3		
Counselors don't really understand field or not up to date in field	•	3		
Counselors don't know how to handle problems other than academic and financial problems	•	3	•	3
Need supportive services i.e., encouragement, academic help	•	1		
Social Barriers				
Have to do better than white students for same grade	•	3		
Only black in class - no other student to relate to	•	1		
Hard to deal with whites	•	3	•	3
Subtle discrimination by faculty and students	•	3	•	3
No black faculty so no faculty member to relate to	•	3		
White faculty don't want blacks in allied health	•	3		

(Cont'd)

TABLE 12 -- BARRIERS TO COMPLETION (CONT'D)

	Students	Intensity	Staff	Intensit
Financial				
Aid doesn't go far enough for older students	.	1	.	3
Hard to work and go to school	.	1	.	3
Have to take too many loans	.	3	.	3
Federal assistance programs cut	.	3		
Science books very expensive	.	3		
Financial aid officers hard to deal with	.	3		
Lack of communication about available aid	.	3		
Not enough money for necessary remedial services			.	3
Programs too long and too expensive	.	3		
Psychological/Other				
Fear of failure	.	3		
Harder to convince blacks who have flunked a course to try again			.	3
Too much pressure	.	3		
Health problems thus poor attendance record			.	3
Remedial programs are discouraging they take so much time	.	3		
Not enough clinical affiliations programs have to be better geared to meet state requirements			.	3

from 1-3 with 1 being the most intense rating. The intensity measures must be interpreted extremely carefully because some of the barriers listed separately in the charts are highly related. For example, in Table 8 under academic preparation the following are listed as barriers:

- Lack of appropriate courses
- Lack of necessary high school science courses
- Required science courses not offered in high school

These barriers are listed separately (with each receiving an intensity rating of 3) because there is a slight difference between them. However, taken together, they can be summarized as lack of necessary prerequisite courses. The intensity measures are included somewhat reluctantly in order to meet contractural obligations. These are not to be literally interpreted as priorities for impact. Rather, in order to determine where to impact the system, the entire set of barriers and intensity ratings must be examined.

5.3 Discussion of the Focus Group Data

Tables 10 - 12 clearly indicate several important considerations in trying to increase the representation of minorities in post-secondary allied health programs. First, a large proportion of each focus group centered around barriers to application. This can be seen by the relative number of barrier items listed in Tables 10 - 12. The students and faculty consensus was that not enough minority students even applied to post-secondary allied health programs. There were two major reasons for this:

- The students were not prepared for or qualified for the allied health programs.
- The students did not know about the allied health fields available.

Superficially these two reasons may seem entirely different, however, they are in fact highly related. Students aren't prepared for allied health because they don't know what allied health fields are, what preparation one needs for allied health, and what courses or levels of courses (i.e., the hard, medium or easy science course) they should take. Students are generally tracked in or about the ninth grade. Thus, students begin preparing or not preparing for future careers at this same time. Thus, if students don't know about allied health at this same time, they are likely to opt out of science or math courses because these courses don't appear relevant to their future goals. Likewise, a student's performance in a science or math course required for high school graduation would tend to be weak if he or she perceived no relevance to the course. This point can be illustrated by a young man in a medical technologist program in Boston, who said "If I only realized in high school how important my chemistry was, I would never have taken the easy teacher, but would have taken the teacher that really made you learn. I just didn't know."

For those students who do find out about an allied health field and who are academically prepared to apply to a program, the lack of knowledge barrier still seems to be a problem. Students do not have adequate information on:

- How to find schools with programs
- How to judge alternative programs
- What financial aid and other supportive services are available
- How to apply for available supportive services

Within the high schools, students report a dirth of knowledge concerning allied health career opportunities. Likewise, outside the school setting, there does not seem to be a readily accessible source of information.

Many of the frequently mentioned barriers to completion reflect:

- Continued inability of minority students to optimally navigate through the educational system.
- Deficient preparation of minority students for the allied health program.

Examples of these barriers are:

- Science courses too hard
- Didn't know what they were getting into academically
- Don't understand the field they are entering
- Lack of communication about available aid

Certain of the barriers resulting from a poor academic background cannot be instantly overcome by the post-secondary institution; however, the "knowledge" barriers relating to available services should be effectively addressed by the post-secondary system.

The staff group sessions all commented that minority students who know they want a career in the health field, have taken all the appropriate courses in high school, have performed capably in their high school courses, and are sophisticated enough to know how and where to apply to schools never end up in an allied health field because they are recruited by special pre-medical or medical programs which are trying to increase their minority representation. Secondly, the faculty commented that many of the minority slots in post-secondary allied health programs are actually filled by well-educated Black or Spanish surname foreigners who come to this country for training in the health field. Upon completion of training, these students oftentimes return to their own countries for employment, thus not only reducing the number of American minority students in the northeastern section obtaining training but also not contributing to increased representation of minorities in the allied health fields in this country. These situations won't change until more American minority students know about and prepare for post-secondary allied health programs.

The focus groups yielded surprisingly little discussion on traditional racial discrimination types of barriers. Examples of such barriers that were mentioned were usually mentioned with regard to completion. These included:

- Have to do better than white student for same grade
- Subtle discrimination by faculty and students
- White faculty don't want blacks in allied health

The minority students perceived social isolation barriers as more significant than racial discrimination barriers. Examples of the frequently mentioned social isolation barriers are:

- Only black in class -- no other student to relate to
- No black faculty so no faculty member to relate to
- Hard to deal with whites

The feelings of social isolation extended from the classroom situation to life on campus to the counseling and teaching staff. Students frequently mentioned the scarcity of suitable social events or social opportunities for the minority student and oftentimes reported traveling 50-100 miles for parties or dates. These same feelings of social isolation extended to the staff of the programs in which they were enrolled. Although often in need of supportive services, remedial classwork or just encouragement, minority students reported reticence or even refusal to go to white staff members.

In summary, the results of the focus group sessions revealed:

- The major reason that there are not more minorities in postsecondary allied health programs is that few minority students learn about them in time to take the required high school courses or prior to making some other career or life commitment that is hard to reverse.
- Because minority students don't develop an understanding of allied health fields earlier in their academic development, they are often ill-prepared to handle the heavy science courseload or heavy academic and clinical courseload required in allied health programs.
- Because there are so few minority allied health students and professionals, minority students entering programs feel isolated.
- Minority students even after matriculation are not adequately aware of either the availability of or how to access supportive services.

6.0 A CONCEPT ANALYSIS OF GROUP DISCUSSIONS ABOUT BARRIERS TO MINORITIES ENTERING THE ALLIED HEALTH FIELDS

6.1 Overview

The previous section of this report presented the objective analysis of focus group interviews with students training in the allied health fields and with the staff and faculty for allied health programs. The concept analysis takes the obvious or denotative statements and reduces them to categories. These categories are based on predetermined interests, e.g., instances of prejudicial rejection, or obvious relationships, e.g., transportation and accessibility. Such analyses can and do yield significant associations. There are times, however, when significant thoughts and feelings are not said straightforwardly. This may be especially true when dealing with delicate and emotionally laden events. At such times, underlying thoughts and feelings permeate the spoken message by means of words chosen by the speaker. In such instances, examination of clusters of words may reveal the significant underlying dimensions.

The following eight sections describe the concept analysis in detail. Section 6.10 contains the final implications and conclusions resulting from the analysis.

6.2 Background to Analytic Method

The content analysis method employed here was developed by Dr. Jules Laffal (Laffal, 1965, 1973) for the basic purpose "of equating different words with substantially the same reference", and for the purpose of a "total vocabulary analysis." In this analysis one proceeds with no preconceived notions of the underlying referents that might exist in the speaker's thoughts but allows the speaker's verbalization to generate the referents. This is done by assignment of each word to a category. The category then suggests the referent. For example, a speaker may use the words "lighter", "lope", "jaunty", and "adlib" which all suggest the referent or idea of easiness and hence would be put into the category EASY.[1] The categories, which are the heart of the system, were developed from a basic psychological framework which from Laffal's point of view, "identities and discriminates categories that might be of importance in man's experience." The underlying premise is stated as follows:

---

[1] All categories are given four letter mneumonic names which refer as closely as possible to the underlying concept of the category.

> "The system does not begin with a logical framework, but seeks to evolve categories from actual content presented in language, while applying a psychological orientation as to possible significant discriminations. There is, therefore, no superordinate scheme such as appears in the logical system of Roget. It is possible that analysis of the associations of the categories with each other may reveal that there are higher-level bonds between the categories themselves, and this might ultimately provide the basis for superordinate arrangements of the categories. At present, each category is given independent and equal status within the system (Laffal, 1965)."

The categories themselves were developed through several stages. In Laffal's words,

> "I began to group words into categories, using at first the criterion of synonymity, and subsequently the additional criteria of similarity and relatedness. Auto and car are synonyms, auto and truck are similar, and auto and train are related. As word categories evolved, I applied what I called the method of "contextual associates"...In this method, the kinds of words occurring in the contexts of separate key words are compared to determine the similarity of contexts, and by implication the cognitive similarity of the key words (Laffal, 1973)."

In this manner, a categorization system involving 116 categories was developed.

There are several additional general features of the analysis system of which the reader should be aware.

1) The reference for any word is determined with respect to a hypothetical "average speaker."

2) "Categorization is on the basis of generally accepted meaning and references which the ordinary intelligent speaker would readily identify."

3) The system is directed at common vocabulary.

4) The categories have been developed to best discriminate between speakers (or types of speakers) and, consequently, do not include many common words which are used equally frequently as part of the speech of all persons or types of persons. For example, words such as "thing", "it", and "you" have no referent meaning unto themselves and consequently are not categorized. These words may, however, be replaced by the noun to which they refer.

To summarize -- Analysis by means of Laffal's concept dictionary provides "a means of looking through a speaker's language to the concepts which lie behind them."

It should be understood that the application of the concept dictionary to the discussion of barriers to minorities entering the allied health fields is an experimental effort. Associates has not, in the past, applied the dictionary to this content area. Associates has, however, applied it successfully to other types of focus group discussions, such as examining the concepts underlying successful television shows and analyzing a discussion of the corporate image of several industry groups.

Any new application requires the development of a certain number of new editing instructions, decisions about handling new words, such as technical jargon, and most important an analysis of the utility of certain categories. These tasks have been accomplished. In addition, an analytic scheme for using the concept profiles produced by the concept dictionary has been developed. This total approach -- a concept dictionary analysis and the analysis of concept categories -- is now known as ACA, Automated Concept Analysis.

The previous pages have provided a brief summary of the background of the ACA analysis. A complete discussion of this analysis is presented in the following sections of the report. Those wishing to read the technical aspects of ACA implementation should follow its development in the next sections. Those wishing to consider only the final implications and conclusions resulting from the analysis should proceed to Section 6.10.

6.3 Preliminary Approach

The two natural groupings, student and faculty, seemed likely to provide important useful information if analyzed and contrasted by the ACA method. These two groups represent people who have to operate in the same situation, but see and cope with that situation for different reasons and from different age, functional, and economic perspectives.

A preliminary study was performed to test this idea. Two focus groups, one student and one faculty, were chosen at random from the six student and five faculty focus groups conducted and reported in Section 4.3. Both groups were from the Boston area. The analysis revealed substantial differences between the student and faculty groups. They differed in structural and time perspective, with the students attempting to grapple with an undifferentiated institution and being oriented to their current problems, while the faculty tended to focus on the student while being oriented to the needs of the students after graduation. They differed in type of needs expressed, with the students emphasizing concern over day-to-day work and learning problems and the need for advice, while the faculty expressed concern primarily over the future needs of the students. The two groups also differed in their perception of each other, with the students showing little differentiation between the faculty and the institution and the faculty seeming to differentiate among the students on impersonal and manipulatable grounds. Finally, the two groups seemed to differ in their style of talking about the topic, with the students being more defensive and justifying their points more often, and the faculty being more firm and authoritative.

These differences were sufficiently strong and were of such a nature that their substantiation could lead to important implications for future recruiting, getting applicants accepted by allied health schools and retention of students in school. A larger study to determine if the results could be generalized to all student and faculty groups was thus undertaken. All six student groups and five faculty groups were used in the major study. A complete description of these 11 groups can be found in Section 4.3.

6.4 Study Method

To analyze a focus group by ACA, a substantial sample of words is chosen from the conversation. It is not necessary to analyze the total conversation. Previous studies of focus group sessions has shown that reliable concept analysis could be obtained with a minimum of 600 words. To be conservative, a sample plan was chosen that would yield at least one and a half times as many words. This sample size also insured a substantial number of words in categories that tend to be used less frequently in general conversation. An initial sample of 25 percent of the words from each group met the above requirements.

After adjustments during editing the actual mean sample size for all groups was 21.8 percent. Table 13 shows the number and percent of words sampled for each group.[2, 3]

After the selected samples were transcribed, they were reviewed and corrected by a research team member in accordance with Laffal's instructions (see Laffal, 1973) and additional editing and coding rules were developed for this set of data. In particular, the word counselor appeared in the discussions, which was not in the dictionary in the same form, however, the word counsel did exist. Other words were in the dictionary but had to be designated by the correct contextual connotation. For example, the word course, which was frequently used in these discussions, can refer to 1) a path, 2) a meal or 3) education. The third meaning was the only one applicable to these focus groups and thus course was coded as such. Certain multi-word technical terms had to be assigned to categories based on their meaning within the discussion rather than the denotative meaning of the individual words making up the term, e.g., allied health field, respiratory therapy and inhalation therapy were coded as career. Certain proper nouns had to be re-designated into codes which denoted their function, e.g., OT (Occupational Therapist), CLA (Certified Laboratory Assistant).

The completely edited and coded transcripts of words were punched onto IBM cards, verified and subjected to analysis at the Uni-Coll DEC 10 Computer Center.

Table 13 presents the total number of words used in each focus group conversation, the number of words sampled from each conversation, the percent of the total conversation which the words represent and the number of words coded for each focus group. The number of words coded is larger than the number of

---

[2] The technique for sampling from each group was as follows. Each focus group conversation was divided into 30 second segments. Each segment was given a value of 1-n. Using a random table, 25 percent of the values of 1-n were chosen. These numbers were then ordered consecutively and recoded in terms of the values on the tape recorder counters. The transposition value in this case was 6, i.e., each 30 second interval was equal to 6 revolutions of the tape recorder counter. The typist started with the first 6 units and then skipped to the next randomly chosen 6 units, etc. until the 25 percent sample was typed.

[3] The sample size and sampling procedure differed for the first student and faculty groups shown in Table 1. These two groups were used in the preliminary study described above and were included in this analysis in order to increase the group sample size to achieve greater statistical stability. In these groups the word samples were 50 percent of the discussion and were chosen by taking every other page from the completely typed transcripts.

TABLE 13 -- WORDS AND CATEGORIES USED IN ACA ANALYSIS

GROUP	TOTAL # OF WORDS IN DISCUSSION	# OF WORDS SAMPLED	% OF TOTAL WORDS	TOTAL # OF WORDS CODED INTO CATEGORIES*	# OF CATEGORIES USED (OUT OF 116)	RELATIVE ENTROPY
Faculty:						
Boston	7,612	3,806	50	4,273	101	.85
Meriden	7,910	1,857	23.5	2,308	93	.86
Bridgeport	8,197	1,902	23.2	2,300	96	.84
New York City A	9,498	1,730	18.2	2,125	99	.87
New York City B	4,357	977	21.3	1,191	85	.85
Student:						
Boston	11,384	5,692	50	7,524	110	.83
Meriden	7,887	1,933	24.5	2,605	101	.83
Bridgeport	4,680	959	20.5	1,265	84	.84
Boston	9,648	2,066	21.4	2,705	93	.82
New York City A	9,176	1,211	19.6	1,567	92	.85
New York City B	9,887	2,354	23.8	2,968	102	.83

---

* These figures exceed the "words sampled" figures due to coding of words with complex meanings into a combination of two categories.

words sampled because the concept analysis program scored words into more than one category.[4]

6.5 Description of the Data

The total number of sampled words ranges from 959 for Student Group 3 to 2,354 for Student Group 6.[5]

Conversations about specific topics do not necessarily generate words that fall into all possible 116 categories. This can be seen in Table 13 under the column labeled "Number of Categories Used." The student groups used between 84 and 110 categories with a mean of 97. The faculty groups used between 85 and 101 categories with a mean of 95.

The students and the faculty as a whole and the individual faculty and student groups show evidence of a fairly wide ranging discussion in which not only were most of the categories used but in which no small group of categories really predominated. The relative entropy scores for the faculty groups ranged from .84 to .87 with a mean of .85. The relative entropy for the student groups ranged from .82 to .85 with a mean of .83. A relative entropy score of 1.00 would have meant that each category had been used as often as any other category.

The average values of the absolute entropy scores were 5.6 and 5.7 for the student and faculty groups respectively. This indicates that both sets of discussions were characterized by the general use of categories normally found in free speech, i.e., the groups spoke in a manner as one would expect them to speak in a free flowing discussion. Laffal (1963) reports an average entropy score of 5.8 for free speech.

The categorized data are presented in two forms (or two types of category profiles). Table 14 shows the data (for both faculty and student groups) by alphabetical listing of the categories. For each group, the first column of numbers is the absolute number of words falling into the respective categories.

---

[4] Not all words have unique referents or categories. The coding scheme allows for this fact by allowing words to be coded into a maximum of two categories. When this occurs they are totaled as separate words.

[5] These ranges do not include Student Group 1 or Faculty Group 1 which, as explained in footnote 3, were sampled at the 50 percent level.

Table 15 shows the percent frequency of each category (for both faculty and student groups) ranked from highest to lowest.

6.6 Data Analysis

Although the preliminary study indicated substantial differences between a faculty group and a student group, it was decided to combine all groups (the 5 faculty and 6 student groups) to form the data base for this study to see if the faculty-student differentiation would again emerge as the result of a statistical analysis.

The general orientation of the analysis was to look for differences among groupings, e.g., between faculty and students, between cities or regions. The reasons for this approach are a) there is no baseline information for any set of groups, so one cannot say that a category that has a high frequency is unique to this discussion, and b) the examination of the differences in the use of categories provides a relative baseline against which to evaluate the language of any set of groups.

The basic data used in the analyses described below are the percentages of words that each group used in a specific category. The use of percentages in the analysis corrects for the differential number of words in the 11 groups.[6]

Based on previous research using the ACA method, the following analytic steps were chosen for use in this study (each step will be explained in detail below):

1. Reduction of category profiles
2. Principal axis factor analysis
3. Factor reduction by rotation
4. Choosing optimal number of factors
5. Discriminant function analysis
6. Final choice of dimensions
7. Supplementary analyses

---

[6] The percentages were well distributed and, hence, no normalization corrections were applied in these analyses.

TABLE 14 -- ALPHABETICAL CATEGORY FREQUENCY

CATEGORY	BOSTON STUDENT NUM	BOSTON STUDENT %-GE	BOSTON FACULTY NUM	BOSTON FACULTY %-GE
044 AFAR	9.0	0.11	11.0	0.25
026 AGGR	7.0	0.09	6.0	0.14
023 AGRE	38.0	0.50	35.0	0.81
054 AID	134.0	1.78	149.0	3.46
028 ANML	74.0	0.98	10.0	0.23
012 ASTR	3.0	0.04	0.0	0.00
012 BACK	29.0	0.38	13.0	0.30
013 BAD	12.0	0.15	5.0	0.11
014 BGIN	12.0	0.15	18.0	0.42
024 BLOK	12.0	0.15	20.0	0.46
016 BLUR	25.0	0.33	24.0	0.56
046 BODY	41.0	0.54	22.0	0.51
007 BUG	1.0	0.01	0.0	0.00
055 BULG	4.0	0.05	5.0	0.11
019 CLEN	3.0	0.04	2.0	0.04
021 COLD	0.0	0.00	0.0	0.00
022 COLR	40.0	0.53	56.0	1.31
119 COVR	10.0	0.13	4.0	0.09
028 CRIM	2.0	0.02	0.0	0.00
042 CRUX	47.0	0.62	39.0	0.91
025 DANG	15.0	0.19	5.0	0.11
032 DEAD	2.0	0.02	1.0	0.02
032 DIRT	11.0	0.14	0.0	0.00
035 DOWN	22.0	0.29	10.0	0.23
039 EASY	25.0	0.33	3.0	0.07
062 EDUC	421.0	5.59	357.0	8.35
091 EMPH	110.0	1.46	71.0	1.66
041 END	10.0	0.13	21.0	0.49
036 ENTH	2.0	0.02	1.0	0.02
037 EVER	71.0	0.94	38.0	0.88
116 EVNT	24.0	0.31	44.0	1.02
118 FAGR	2.0	0.02	0.0	0.00
043 FALS	5.0	0.06	5.0	0.11
005 FLOW	6.0	0.07	3.0	0.07
022 FOND	20.0	0.26	4.0	0.09
020 FOOD	7.0	0.09	1.0	0.02
021 FOOL	3.0	0.04	0.0	0.00
056 FORM	118.0	1.56	75.0	1.74
048 FORW	67.0	0.89	39.0	0.91
059 FURN	0.0	0.00	0.0	0.00
022 GANG	0.0	0.00	1.0	0.02
017 GLAD	9.0	0.11	4.0	0.09
052 GO	145.0	1.92	88.0	2.05
051 GOOD	86.0	1.14	62.0	1.44
052 GRUP	128.0	1.70	129.0	3.01
007 HAVE	174.0	2.31	75.0	1.74
053 HEAR	14.0	0.18	12.0	0.28
058 HEAT	5.0	0.06	4.0	0.09
057 HOLW	8.0	0.10	7.0	0.16
086 HOLY	3.0	0.04	1.0	0.02

	FACULTY								STUDENT									
	MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A		NYC B	
CATEGORY	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE
044 AFAR	5.0	0.21	4.0	0.17	29.0	1.36	2.0	0.16	6.0	0.23	0.0	0.00	2.0	0.07	5.0	0.31	7.0	0.23
026 AGGR	4.0	0.17	3.0	0.13	1.0	0.04	0.0	0.00	4.0	0.15	1.0	0.07	6.0	0.22	3.0	0.19	2.0	0.06
023 AGRE	18.0	0.77	33.0	1.43	24.0	1.12	18.0	1.51	20.0	0.76	18.0	1.42	29.0	1.07	16.0	1.02	13.0	0.43
054 AID	65.0	2.81	50.0	2.17	32.0	1.50	35.0	2.93	31.0	1.19	37.0	2.92	49.0	1.81	45.0	2.87	47.0	1.58
028 ANML	17.0	0.73	5.0	0.21	7.0	0.32	0.0	0.00	24.0	0.92	4.0	0.31	6.0	0.22	2.0	0.12	13.0	0.43
012 ASTR	0.0	0.00	0.0	0.00	1.0	0.04	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	1.0	0.06	0.0	0.00
012 BACK	3.0	0.12	9.0	0.39	10.0	0.47	5.0	0.41	4.0	0.15	1.0	0.07	16.0	0.59	7.0	0.44	4.0	0.13
013 BAD	3.0	0.12	0.0	0.00	2.0	0.09	0.0	0.00	2.0	0.07	3.0	0.23	1.0	0.03	1.0	0.06	0.0	0.00
014 BGIN	15.0	0.64	4.0	0.17	10.0	0.47	6.0	0.50	13.0	0.49	5.0	0.39	3.0	0.11	7.0	0.44	9.0	0.30
024 BLOK	13.0	0.56	1.0	0.04	9.0	0.42	1.0	0.08	3.0	0.11	2.0	0.15	5.0	0.18	6.0	0.38	3.0	0.10
016 BLUR	37.0	1.60	13.0	0.56	10.0	0.47	5.0	0.41	9.0	0.34	4.0	0.31	18.0	0.66	12.0	0.76	10.0	0.33
044 BODY	20.0	0.86	9.0	0.39	11.0	0.51	5.0	0.41	16.0	0.61	3.0	0.23	7.0	0.25	9.0	0.57	26.0	0.87
027 BUG	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.03	1.0	0.06	1.0	0.03
055 BULG	0.0	0.00	0.0	0.00	3.0	0.14	1.0	0.08	3.0	0.11	0.0	0.00	0.0	0.00	1.0	0.06	5.0	0.16
019 CLEN	0.0	0.00	0.0	0.00	1.0	0.04	1.0	0.08	0.0	0.00	0.0	0.00	2.0	0.07	0.0	0.00	0.0	0.00
021 COLD	0.0	0.00	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
022 COLR	17.0	0.73	4.0	0.17	20.0	0.94	0.0	0.00	7.0	0.26	0.0	0.00	27.0	0.99	1.0	0.06	20.0	0.67
119 COVR	2.0	0.08	3.0	0.13	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	3.0	0.19	2.0	0.06
028 CRIM	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	8.0	0.30	0.0	0.00	1.0	0.03	0.0	0.00	6.0	0.20
042 CRUX	9.0	0.38	10.0	0.43	20.0	0.94	7.0	0.58	3.0	0.11	5.0	0.39	14.0	0.51	5.0	0.31	11.0	0.37
025 DANG	1.0	0.04	6.0	0.26	4.0	0.18	2.0	0.16	7.0	0.26	3.0	0.23	4.0	0.14	2.0	0.12	6.0	0.20
032 DEAD	2.0	0.08	2.0	0.08	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	3.0	0.10
032 DIRT	0.0	0.00	2.0	0.08	0.0	0.00	0.0	0.00	2.0	0.07	0.0	0.00	2.0	0.07	1.0	0.06	1.0	0.03
035 DOWN	8.0	0.34	7.0	0.30	7.0	0.32	2.0	0.16	11.0	0.42	3.0	0.23	5.0	0.18	3.0	0.19	7.0	0.23
039 EASY	2.0	0.08	1.0	0.04	11.0	0.51	2.0	0.16	2.0	0.07	0.0	0.00	4.0	0.14	0.0	0.00	7.0	0.23
062 EDUC	205.0	8.86	211.0	9.17	139.0	6.54	129.0	10.83	152.0	5.73	75.0	5.82	203.0	7.50	129.0	8.25	161.0	5.42
091 EMPH	38.0	1.64	32.0	1.39	38.0	1.78	19.0	1.59	47.0	1.80	13.0	1.02	62.0	2.29	18.0	1.14	56.0	1.89
041 END	10.0	0.43	6.0	0.26	5.0	0.23	3.0	0.25	5.0	0.19	4.0	0.31	6.0	0.22	10.0	0.63	12.0	0.40
036 ENTH	2.0	0.08	0.0	0.00	2.0	0.09	4.0	0.33	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.03
037 EVER	25.0	1.08	28.0	1.21	20.0	0.94	12.0	1.00	22.0	0.84	10.0	0.79	40.0	1.47	16.0	1.02	49.0	1.65
116 EVNT	16.0	0.69	21.0	0.91	10.0	0.47	5.0	0.41	10.0	0.38	0.0	0.00	14.0	0.51	12.0	0.76	7.0	0.23
118 FAGR	0.0	0.00	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.06	0.0	0.00
043 FALS	4.0	0.17	1.0	0.04	3.0	0.14	0.0	0.00	13.0	0.49	0.0	0.00	1.0	0.03	0.0	0.00	15.0	0.50
005 FLOW	4.0	0.17	3.0	0.13	1.0	0.04	0.0	0.00	1.0	0.03	6.0	0.47	0.0	0.00	2.0	0.12	1.0	0.03
022 FOND	4.0	0.17	3.0	0.13	0.0	0.00	0.0	0.00	6.0	0.23	4.0	0.31	7.0	0.25	1.0	0.06	3.0	0.10
020 FOOD	0.0	0.00	0.0	0.00	1.0	0.04	1.0	0.08	2.0	0.07	3.0	0.23	2.0	0.07	0.0	0.00	9.0	0.30
001 FOOL	0.0	0.00	2.0	0.08	2.0	0.09	0.0	0.00	2.0	0.07	0.0	0.00	2.0	0.07	0.0	0.00	0.0	0.00
056 FORM	46.0	1.99	48.0	2.08	41.0	1.92	20.0	1.67	30.0	1.15	12.0	0.94	26.0	0.96	28.0	1.78	36.0	1.21
048 FORW	13.0	0.56	23.0	1.00	16.0	0.75	7.0	0.58	28.0	1.07	7.0	0.55	26.0	0.96	19.0	1.21	21.0	0.70
059 FURN	0.0	0.00	0.0	0.00	1.0	0.04	0.0	0.00	1.0	0.03	0.0	0.00	0.0	0.00	2.0	0.12	1.0	0.03
022 GANG	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	2.0	0.06
017 GLAD	0.0	0.00	3.0	0.13	2.0	0.09	1.0	0.08	6.0	0.23	0.0	0.00	4.0	0.14	1.0	0.06	0.0	0.00
052 GO	44.0	1.90	31.0	1.34	37.0	1.74	22.0	1.84	51.0	1.95	27.0	2.13	69.0	2.55	29.0	1.85	69.0	2.32
051 GOOD	30.0	1.29	41.0	1.78	36.0	1.69	15.0	1.25	38.0	1.45	19.0	1.50	69.0	2.55	15.0	0.95	33.0	1.11
052 GRUP	72.0	3.11	56.0	2.43	53.0	2.49	21.0	1.76	33.0	1.26	11.0	0.86	51.0	1.88	29.0	1.85	42.0	1.41
007 HAVE	49.0	2.12	31.0	1.34	36.0	1.69	17.0	1.42	53.0	2.03	19.0	1.50	57.0	2.10	38.0	2.42	57.0	1.92
053 HEAR	2.0	0.08	7.0	0.30	5.0	0.23	0.0	0.00	7.0	0.26	7.0	0.55	5.0	0.18	4.0	0.25	12.0	0.40
058 HEAT	1.0	0.04	1.0	0.04	0.0	0.00	2.0	0.16	11.0	0.42	1.0	0.07	2.0	0.07	0.0	0.00	0.0	0.00
057 HOLW	2.0	0.08	0.0	0.00	3.0	0.14	0.0	0.00	2.0	0.07	1.0	0.07	2.0	0.07	0.0	0.00	0.0	0.00
086 HOLY	0.0	0.00	2.0	0.08	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00

TABLE 14 -- ALPHABETICAL CATEGORY FREQUENCIES (CONT'D)

	BOSTON STUDENT		BOSTON FACULTY			FACULTY								STUDENT									
						MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A		NYC B	
CATEGORY	NUM	%-GE	NUM	%-GE	CATEGORY	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE
056 HOME	285.0	3.78	90.0	2.10	056 HOME	69.0	2.98	89.0	3.86	65.0	3.05	39.0	3.27	94.0	3.60	53.0	4.06	112.0	4.14	78.0	4.97	88.0	2.96
115 HSCH	3.0	0.04	0.0	0.00	115 HSCH	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	2.0	0.08	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
081 IDEA	508.0	6.75	250.0	5.85	081 IDEA	163.0	7.06	153.0	6.65	104.0	4.89	76.0	6.38	147.0	5.64	88.0	6.74	155.0	5.73	102.0	6.50	221.0	7.44
061 IN	130.0	1.72	67.0	1.56	061 IN	35.0	1.51	23.0	1.00	32.0	1.50	19.0	1.59	32.0	1.22	15.0	1.18	36.0	1.33	27.0	1.72	38.0	1.28
083 ION	27.0	0.35	0.0	0.00	083 ION	1.0	0.04	3.0	0.13	0.0	0.00	1.0	0.08	1.0	0.03	0.0	0.00	0.0	0.00	0.0	0.00	5.0	0.16
063 JOIN	29.0	0.38	39.0	0.91	063 JOIN	31.0	1.34	20.0	0.86	15.0	0.70	14.0	1.17	5.0	0.19	7.0	0.55	12.0	0.44	12.0	0.76	6.0	0.22
123 KIN	45.0	0.59	9.0	0.21	123 KIN	3.0	0.12	2.0	0.08	4.0	0.18	1.0	0.08	14.0	0.53	15.0	1.18	9.0	0.33	25.0	1.59	20.0	0.67
110 LACK	22.0	0.29	20.0	0.46	110 LACK	16.0	0.69	11.0	0.47	10.0	0.47	2.0	0.16	4.0	0.15	2.0	0.15	6.0	0.22	11.0	0.70	7.0	0.23
047 LADY	114.0	1.51	7.0	0.16	047 LADY	8.0	0.34	15.0	0.65	14.0	0.65	9.0	0.75	35.0	1.34	17.0	1.34	23.0	0.85	16.0	1.02	12.0	0.42
015 LANG	15.0	0.19	21.0	0.49	015 LANG	9.0	0.38	6.0	0.26	7.0	0.32	7.0	0.58	11.0	0.42	1.0	0.07	5.0	0.18	5.0	0.31	7.0	0.23
066 LAW	4.0	0.05	4.0	0.09	066 LAW	3.0	0.12	0.0	0.00	3.0	0.14	2.0	0.16	2.0	0.07	0.0	0.00	5.0	0.18	1.0	0.06	2.0	0.06
034 LEAD	76.0	1.01	31.0	0.72	034 LEAD	8.0	0.34	20.0	0.86	16.0	0.75	11.0	0.92	27.0	1.03	16.0	1.26	59.0	2.18	6.0	0.38	28.0	0.94
067 LITL	34.0	0.45	26.0	0.60	067 LITL	19.0	0.82	15.0	0.65	11.0	0.51	5.0	0.41	10.0	0.38	10.0	0.79	8.0	0.29	3.0	0.19	6.0	0.20
068 LIVE	13.0	0.17	3.0	0.07	068 LIVE	7.0	0.30	2.0	0.08	7.0	0.32	0.0	0.00	6.0	0.23	3.0	0.23	2.0	0.07	4.0	0.25	2.0	0.06
069 MALE	27.0	0.35	11.0	0.25	069 MALE	1.0	0.04	10.0	0.43	5.0	0.23	3.0	0.25	14.0	0.53	1.0	0.07	1.0	0.03	7.0	0.44	6.0	0.22
023 MANT	15.0	0.19	29.0	0.67	023 MANT	11.0	0.47	1.0	0.04	2.0	0.09	5.0	0.41	1.0	0.03	6.0	0.47	11.0	0.40	1.0	0.06	10.0	0.33
071 MECH	14.0	0.18	1.0	0.02	071 MECH	0.0	0.00	3.0	0.13	0.0	0.00	1.0	0.08	1.0	0.03	1.0	0.07	2.0	0.07	0.0	0.00	2.0	0.06
029 MEDC	144.0	1.91	26.0	0.60	029 MEDC	10.0	0.43	27.0	1.17	12.0	0.56	9.0	0.75	33.0	1.26	9.0	0.71	5.0	0.18	12.0	0.76	32.0	1.07
072 MONY	33.0	0.43	48.0	1.12	072 MONY	30.0	1.29	15.0	0.65	15.0	0.70	10.0	0.83	2.0	0.07	6.0	0.47	11.0	0.40	8.0	0.51	39.0	1.31
129 MOTV	132.0	1.75	88.0	2.05	129 MOTV	33.0	1.42	68.0	2.95	39.0	1.83	22.0	1.84	34.0	1.30	17.0	1.34	44.0	1.62	18.0	1.14	46.0	1.54
087 MSMT	6.0	0.07	2.0	0.04	087 MSMT	2.0	0.08	0.0	0.00	3.0	0.14	1.0	0.08	3.0	0.11	2.0	0.15	6.0	0.22	0.0	0.00	6.0	0.20
070 MTRL	51.0	0.67	9.0	0.21	070 MTRL	5.0	0.21	3.0	0.13	3.0	0.14	5.0	0.41	12.0	0.46	7.0	0.55	11.0	0.40	4.0	0.25	9.0	0.30
026 MUCH	100.0	1.32	44.0	1.03	026 MUCH	41.0	1.77	36.0	1.56	35.0	1.64	11.0	0.92	21.0	0.80	21.0	1.66	23.0	0.85	34.0	2.16	38.0	1.28
117 MUSC	0.0	0.00	2.0	0.04	117 MUSC	3.0	0.12	0.0	0.00	0.0	0.00	0.0	0.00	2.0	0.07	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.03
105 MYTH	2.0	0.02	2.0	0.04	105 MYTH	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
073 NEAR	94.0	1.24	53.0	1.24	073 NEAR	12.0	0.51	16.0	0.69	22.0	1.03	19.0	1.59	30.0	1.15	11.0	0.86	47.0	1.73	23.0	1.46	33.0	1.11
098 NEW	52.0	0.69	16.0	0.37	098 NEW	15.0	0.64	9.0	0.39	3.0	0.14	3.0	0.25	7.0	0.26	1.0	0.07	4.0	0.14	9.0	0.57	15.0	0.50
074 NO	256.0	3.40	115.0	2.69	074 NO	57.0	2.46	118.0	5.13	74.0	3.48	29.0	2.43	73.0	2.80	40.0	3.15	84.0	3.10	45.0	2.87	126.0	4.24
114 NSCH	3.0	0.04	0.0	0.00	114 NSCH	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
075 NUMR	156.0	2.07	124.0	2.90	075 NUMR	63.0	2.72	93.0	4.04	90.0	4.23	53.0	4.45	58.0	2.22	34.0	2.68	40.0	1.47	52.0	3.31	127.0	4.27
076 OPEN	57.0	0.75	20.0	0.46	076 OPEN	11.0	0.47	10.0	0.43	8.0	0.37	7.0	0.58	15.0	0.57	7.0	0.55	15.0	0.55	10.0	0.63	21.0	0.70
027 OPPO	153.0	2.03	106.0	2.48	027 OPPO	48.0	2.07	47.0	2.04	49.0	2.30	29.0	2.43	46.0	1.76	29.0	2.29	56.0	2.07	21.0	1.34	57.0	1.92
077 OUT	44.0	0.58	22.0	0.51	077 OUT	15.0	0.64	15.0	0.65	12.0	0.56	9.0	0.75	11.0	0.42	15.0	1.18	11.0	0.40	19.0	1.21	19.0	0.64
107 PANG	19.0	0.25	7.0	0.16	107 PANG	5.0	0.21	5.0	0.21	8.0	0.37	2.0	0.16	8.0	0.30	3.0	0.23	8.0	0.29	8.0	0.51	7.0	0.23
097 PAST	16.0	0.21	17.0	0.39	097 PAST	12.0	0.51	4.0	0.17	3.0	0.14	1.0	0.08	5.0	0.19	3.0	0.23	4.0	0.14	7.0	0.44	6.0	0.20
124 PATH	35.0	0.46	17.0	0.39	124 PATH	14.0	0.60	13.0	0.56	21.0	0.98	5.0	0.41	31.0	1.19	5.0	0.39	12.0	0.44	6.0	0.38	15.0	0.50
078 PLAC	77.0	1.02	64.0	1.49	078 PLAC	35.0	1.51	18.0	0.78	50.0	2.35	25.0	2.09	51.0	1.95	16.0	1.26	25.0	0.92	17.0	1.08	27.0	0.90
079 PLAY	7.0	0.09	14.0	0.32	079 PLAY	3.0	0.12	5.0	0.21	3.0	0.14	0.0	0.00	3.0	0.11	7.0	0.55	6.0	0.22	0.0	0.00	9.0	0.30
033 POWR	75.0	0.99	71.0	1.66	033 POWR	27.0	1.16	29.0	1.26	28.0	1.31	14.0	1.17	6.0	0.23	3.0	0.23	22.0	0.81	16.0	1.02	10.0	0.33
045 QUIK	11.0	0.14	8.0	0.18	045 QUIK	1.0	0.04	0.0	0.00	2.0	0.09	2.0	0.16	2.0	0.07	1.0	0.07	0.0	0.00	2.0	0.12	9.0	0.30
092 REST	13.0	0.17	4.0	0.09	092 REST	2.0	0.08	3.0	0.13	5.0	0.23	2.0	0.16	22.0	0.84	6.0	0.47	11.0	0.40	4.0	0.25	10.0	0.33
088 SEP	20.0	0.26	35.0	0.81	088 SEP	8.0	0.34	9.0	0.39	16.0	0.75	6.0	0.50	16.0	0.61	2.0	0.15	11.0	0.40	6.0	0.38	16.0	0.53
089 SEX	0.0	0.00	0.0	0.00	089 SEX	0.0	0.00	0.0	0.00	1.0	0.04	1.0	0.08	2.0	0.08	1.0	0.07	1.0	0.03	1.0	0.06	1.0	0.03
090 SHRP	38.0	0.50	42.0	0.98	090 SHRP	18.0	0.77	19.0	0.82	20.0	0.94	4.0	0.33	10.0	0.38	2.0	0.15	10.0	0.36	6.0	0.38	10.0	0.33
082 SICK	9.0	0.11	4.0	0.09	082 SICK	4.0	0.17	4.0	0.17	1.0	0.04	2.0	0.16	7.0	0.26	2.0	0.15	1.0	0.03	1.0	0.06	2.0	0.06
044 SIML	132.0	1.75	87.0	2.03	044 SIML	34.0	1.47	35.0	1.52	32.0	1.50	29.0	2.43	37.0	1.42	19.0	1.50	56.0	2.07	21.0	1.34	53.0	1.78
036 SIP	1.0	0.01	0.0	0.00	036 SIP	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
062 SOLE	683.0	9.07	244.0	5.71	062 SOLE	108.0	4.67	115.0	5.00	110.0	5.17	60.0	5.03	273.0	10.47	178.0	14.11	275.0	10.16	112.0	7.14	249.0	8.38
049 SOMA	54.0	0.71	9.0	0.21	049 SOMA	2.0	0.08	2.0	0.08	3.0	0.14	9.0	0.75	22.0	0.84	7.0	0.55	8.0	0.29	5.0	0.31	13.0	0.43
093 SOME	72.0	0.95	71.0	1.66	093 SOME	37.0	1.60	34.0	1.47	26.0	1.22	25.0	2.09	16.0	0.61	17.0	1.34	14.0	0.51	22.0	1.40	29.0	0.97

TABLE 14 -- ALPHABETICAL CATEGORY FREQUENCIES (CONT'D)

CATEGORY	BOSTON STUDENT NUM	BOSTON STUDENT %-GE	BOSTON FACULTY NUM	BOSTON FACULTY %-GE
096 SUB	16.0	0.21	38.0	0.88
064 TALK	147.0	1.95	95.0	2.22
108 TIME	116.0	1.54	77.0	1.80
122 TRIV	3.0	[illegible]	[illegible]	[illegible]
104 TRUE	96.0	1.27	54.0	1.26
106 UP	39.0	0.52	25.0	0.58
009 VAPR	4.0	0.05	0.0	0.00
018 VARY	34.0	0.45	18.0	0.42
108 VEGT	2.0	0.02	0.0	0.00
101 VEMC	2.0	0.02	0.0	0.00
086 VIEW	72.0	0.95	56.0	1.31
113 WE	695.0	9.23	282.0	6.59
011 WEA	1.0	0.01	1.0	0.02
095 WEAK	9.0	0.11	6.0	0.14
025 WHOL	91.0	1.20	55.0	1.28
111 WORK	126.0	1.67	50.0	1.17
065 WRIT	65.0	0.86	22.0	0.51
112 YNG	95.0	1.26	12.0	0.28
031 ZZ31	0.0	0.00	2.0	0.05
099 ZZ99	0.0	0.00	0.0	0.00

	FACULTY								STUDENT									
	MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A		NYC B	
CATEGORY	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE	NUM	%-GE
096 SUB	27.0	1.16	21.0	0.91	10.0	0.47	1.0	0.08	4.0	0.15	0.0	0.00	1.0	0.03	8.0	0.51	4.0	0.13
064 TALK	42.0	1.81	32.0	1.39	83.0	3.90	23.0	1.93	47.0	1.80	30.0	2.37	45.0	1.66	25.0	1.59	54.0	1.81
108 TIME	59.0	2.55	40.0	1.73	39.0	1.83	21.0	1.76	62.0	2.38	33.0	2.60	50.0	1.84	32.0	2.04	96.0	[illegible]
122 TRIV	0.0	0.00	1.0	0.04	4.0	0.18	0.0	0.00	1.0	0.03	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.03
104 TRUE	26.0	1.12	36.0	1.56	28.0	1.31	12.0	1.00	27.0	1.03	6.0	[illegible]	42.0	1.55	9.0	0.57	41.0	1.38
106 UP	19.0	0.82	16.0	0.69	24.0	1.12	5.0	0.41	16.0	0.61	4.0	0.31	22.0	0.81	7.0	0.44	17.0	0.57
009 VAPR	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	1.0	0.03	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
018 VARY	13.0	0.56	15.0	0.65	22.0	1.03	4.0	0.33	37.0	1.42	6.0	[illegible]	21.0	0.77	7.0	0.44	15.0	0.50
108 VEGT	0.0	0.00	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
101 VEMC	3.0	0.12	0.0	0.00	0.0	0.00	1.0	0.08	0.0	0.00	1.0	0.07	0.0	0.00	1.0	0.06	7.0	0.23
086 VIEW	20.0	0.86	11.0	0.47	17.0	0.80	5.0	0.41	25.0	0.95	8.0	0.63	26.0	0.96	14.0	0.89	36.0	1.21
113 WE	176.0	7.62	167.0	7.26	122.0	5.74	80.0	6.71	283.0	10.86	121.0	9.56	286.0	10.57	114.0	7.27	259.0	8.72
011 WEA	0.0	0.00	1.0	0.04	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
095 WEAK	2.0	0.08	8.0	0.34	4.0	0.18	3.0	0.25	2.0	0.07	0.0	0.00	5.0	0.16	3.0	0.19	2.0	0.06
025 WHOL	31.0	1.34	31.0	1.34	32.0	1.50	23.0	1.93	39.0	1.49	20.0	1.58	34.0	1.25	24.0	1.53	47.0	1.58
111 WORK	27.0	1.16	37.0	1.60	59.0	2.77	45.0	3.77	53.0	2.03	33.0	[illegible]	42.0	1.55	31.0	1.97	41.0	1.38
065 WRIT	7.0	0.30	12.0	0.52	19.0	0.89	9.0	0.75	15.0	0.57	5.0	0.39	16.0	0.59	14.0	0.89	34.0	1.14
112 YNG	12.0	0.51	13.0	0.56	7.0	0.32	0.0	0.00	51.0	1.95	20.0	1.58	5.0	0.18	6.0	0.38	17.0	0.57
031 ZZ31	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
099 ZZ99	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00

TABLE 15 -- PERCENT OF WORDS IN EACH CATEGORY FOR STUDENTS AND FACULTY: FREQUENCY LISTING OF CATEGORIES

					FACULTY								STUDENT							
	BOSTON STUDENT		BOSTON FACULTY		MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A		NYC B
BY FREQUENCY	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE
	WE	9.23	EDUC	8.35	EDUC	8.86	EDUC	9.17	EDUC	6.94	EDUC	10.83	SOLE	10.97	SOLE	10.11	WE	10.57	EDUC	8.23	WE	8.72
	SOLE	9.37	WE	6.59	WE	7.62	WE	7.25	WE	5.74	WE	6.71	WE	10.86	WE	9.56	SOLE	10.10	WE	7.27	SOLE	8.30
	IDEA	6.75	IDEA	5.85	IDEA	7.06	IDEA	6.65	SOLE	5.17	IDEA	6.36	EDUC	5.85	IDEA	6.79	EDUC	7.50	SOLE	7.14	IDEA	7.44
	EDUC	5.59	SOLE	5.71	SOLE	4.67	NO	5.13	IDEA	4.99	SOLE	5.03	IDEA	5.64	EDUC	5.92	IDEA	5.73	IDEA	6.50	EDUC	5.42
	HOME	3.76	AID	3.40	GRUP	3.11	SOLE	5.00	NUMR	4.23	NUMR	4.85	HOME	3.64	HOME	4.06	HOME	4.14	HOME	4.97	NUMR	4.27
	NO	3.42	GRUP	3.01	HOME	2.98	NUMR	4.04	TALK	3.70	WORK	3.77	NO	2.84	NO	3.63	NO	3.10	NUMR	3.31	NO	4.24
	HAVE	2.51	NUMR	2.90	AID	2.81	HOME	3.06	NO	3.48	HOME	3.27	TIME	2.30	AID	2.92	GO	2.55	AID	2.67	TIME	3.33
	NUMR	2.37	NO	2.69	NUMR	2.72	MOTV	2.45	HOME	3.05	AID	2.93	NUMR	2.22	NUMR	2.60	GOOD	2.55	NO	2.67	HOME	2.95
	OPPO	2.03	OPPO	2.45	TIME	2.55	OPPO	2.09	WORK	2.77	NO	2.43	HAVE	2.03	TIME	2.60	EMPH	2.24	HAVE	2.42	GO	2.32
	TALK	1.95	TALK	2.22	NO	2.46	GRUP	2.43	GRUP	2.19	OPPO	2.43	WORK	2.03	WORK	2.64	LEAD	2.10	MUCH	2.10	HAVE	1.92
	GO	1.92	HOME	2.10	HAVE	2.12	AID	2.17	PLAC	2.15	SIML	2.43	GO	1.95	TALK	2.37	HAVE	2.10	TIME	2.24	OPPO	1.92
	MEDC	1.91	GO	2.05	OPPO	2.07	FORM	2.08	OPPO	2.34	PLAC	2.09	YNG	1.95	OPPO	2.29	OPPO	2.07	WORK	1.97	EMPH	1.86
	AID	1.76	MOTV	2.05	FORM	1.99	GOOD	1.70	FORM	1.92	SOME	2.07	EMPH	1.82	GO	2.13	SIML	2.07	GO	1.85	TALK	1.81
	MOTV	1.75	SIML	2.03	GO	1.90	TIME	1.73	MOTV	1.93	TALK	1.93	TALK	1.80	MUCH	1.66	GRUP	1.88	GRUP	1.85	SIML	1.76
	SIML	1.75	TIME	1.90	TALK	1.81	WORK	1.60	TIME	1.93	WHOL	1.93	OPPO	1.76	WHOL	1.58	TIME	1.84	FORM	1.78	EVEN	1.65
	IN	1.72	FORM	1.78	MUCH	1.77	MUCH	1.56	EMPH	1.76	GO	1.84	WHOL	1.49	YNG	1.58	AID	1.81	IN	1.72	AID	1.56
	GRUP	1.70	HAVE	1.72	EMPH	1.64	TRUE	1.56	GO	1.74	MOTV	1.84	GOOD	1.45	GOOD	1.52	NEAR	1.73	KIN	1.59	WHOL	1.56
	WORK	1.57	EMPH	1.66	BLUR	1.66	SIML	1.52	GOOD	1.69	GRUP	1.76	SIML	1.42	HAVE	1.50	TALK	1.66	TALK	1.59	MOTV	1.54
	FORM	1.56	POWR	1.65	SOME	1.64	SOME	1.47	HAVE	1.69	TIME	1.76	VARY	1.42	SIML	1.50	MOTV	1.62	WHOL	1.53	GRUP	1.41
	TIME	1.54	SOME	1.66	IN	1.51	AGRE	1.43	MUCH	1.64	FORM	1.67	LADY	1.34	AGRE	1.42	TRUE	1.55	NEAR	1.46	TRUE	1.30
	LADY	1.51	MUCH	1.65	PLAC	1.51	EMPH	1.39	AID	1.52	EMPH	1.59	MOTV	1.30	LADY	1.30	WORK	1.55	SOME	1.40	WORK	1.30
	EMPH	1.45	IN	1.59	SIML	1.47	TALK	1.39	IN	1.52	IN	1.59	GRUP	1.26	MOTV	1.30	EVER	1.47	OPPO	1.34	MONY	1.31
	MUCH	1.32	PLAC	1.49	MOTV	1.42	GO	1.34	SIML	1.50	NEAR	1.59	MEDC	1.26	SOME	1.34	NUMR	1.47	SIML	1.34	IN	1.28
	TRUE	1.27	GOOD	1.40	JOIN	1.34	HAVE	1.34	WHOL	1.50	AGRE	1.51	IN	1.22	LEAD	1.26	IN	1.33	FORM	1.21	MUCH	1.28
	YNG	1.26	COLR	1.31	WHOL	1.34	WHOL	1.34	AFAR	1.36	HAVE	1.42	AID	1.19	PLAC	1.25	WHOL	1.25	OUT	1.21	FORM	1.21
	NEAR	1.24	VIEW	1.31	GOOD	1.29	POWR	1.26	POWR	1.31	GOOD	1.25	PATH	1.19	IN	1.18	AGRE	1.07	EMPH	1.14	VIEW	1.21
	WHOL	1.22	WHOL	1.28	MONY	1.29	EVER	1.21	TRUE	1.31	JOIN	1.17	PLAC	1.19	KIN	1.18	COLR	0.99	MOTV	1.14	WRIT	1.14
	GOOD	1.14	TRUE	1.26	POWR	1.10	MEDC	1.17	SOME	1.22	POWR	1.17	FORM	1.15	OUT	1.18	FORM	0.96	PLAC	1.08	GOOD	1.11
	PLAC	1.02	NEAR	1.24	SUR	1.16	FORM	1.30	AGRE	1.12	EVER	1.00	NEAR	1.15	EMPH	1.02	FORM	0.96	EVER	1.02	NEAR	1.11
	LEAD	1.01	WORK	1.17	WORK	1.16	IN	1.20	UP	1.12	TRUE	1.00	FORM	1.07	FORM	0.94	VIEW	0.96	LADY	1.02	MEDC	1.07
	POWR	0.94	MONY	1.12	TRUE	1.12	EVNT	0.91	NEAR	1.03	LEAD	0.92	LEAD	1.03	GRUP	0.86	PLAC	0.92	POWR	1.02	SOME	0.97
	ANML	0.94	EVNT	1.02	EVEN	1.00	SUB	0.91	VARY	1.03	MUCH	0.92	TRUE	1.03	NEAR	0.86	LADY	0.85	AGRE	1.02	LEAD	0.94
	SOME	0.75	SHRP	0.98	BODY	0.86	JOIN	0.86	PATH	0.98	MONY	0.83	VIEW	0.95	EVER	0.79	MUCH	0.85	GOOD	0.95	PLAC	0.90
	EVER	0.94	FORM	0.91	VIEW	0.86	LEAD	0.86	COLR	0.94	LADY	0.75	ANML	0.92	LITL	0.79	FORM	0.81	VIEW	0.89	BODY	0.87
	VIEW	0.93	JOIN	0.91	LITL	0.82	SHRP	0.82	CRUX	0.94	MEDC	0.75	EVER	0.84	MEDC	0.71	UP	0.81	WRIT	0.89	FORM	0.72
	FORM	0.89	CRUX	0.91	UP	0.82	PLAC	0.78	SHRP	0.94	OUT	0.75	REST	0.84	TRUE	0.63	VARY	0.77	JOIN	0.76	OPEN	0.70
	WRIT	0.85	SUB	0.89	AGRE	0.77	NEAR	0.69	EVER	0.96	SOMA	0.75	SOMA	0.84	VARY	0.63	BLUR	0.66	MEDC	0.76	KIN	0.67
	OPEN	0.75	EVER	0.86	SHRP	0.77	UP	0.69	WRIT	0.89	WRIT	0.75	MUCH	0.80	VIEW	0.63	BACK	0.59	EVNT	0.76	COLR	0.67
	SOMA	0.71	AGRE	0.81	ANML	0.73	LADY	0.65	VIEW	0.80	FORM	0.58	AGRE	0.76	FORM	0.55	WRIT	0.59	BLUR	0.76	OUT	0.64
	SEX	0.69	SEP	0.81	COLR	0.73	LITL	0.65	LEAD	0.75	LARG	0.58	SEP	0.61	NEAR	0.55	OPEN	0.55	LACK	0.70	UP	0.57
	MTRL	0.67	LEAD	0.72	LACK	0.69	MONY	0.65	SEP	0.75	OPEN	0.59	SOME	0.61	JOIN	0.55	EVNT	0.51	OPEN	0.63	YNG	0.57
	CRUX	0.62	MART	0.67	EVNT	0.69	OUT	0.65	FORM	0.75	CRUX	0.58	UP	0.61	MTRL	0.55	SOME	0.51	END	0.63	SEP	0.53
	KIN	0.59	LITL	0.64	NEW	0.64	VARY	0.55	JOIN	0.70	BGIN	0.58	BODY	0.61	OPEN	0.55	CRUX	0.51	NEW	0.57	NEW	0.53
	OUT	0.58	MEDC	0.60	OUT	0.64	BLUR	0.55	MONY	0.72	SEP	0.58	OPEN	0.57	PLAY	0.55	JOIN	0.44	TRUE	0.57	PATH	0.50
	BODY	0.54	UP	0.58	BGIN	0.64	PATH	0.56	LADY	0.65	BACK	0.41	WRIT	0.57	SOMA	0.55	PATH	0.44	BODY	0.57	FALS	0.54
	COLR	0.53	BLUR	0.56	PATH	0.60	YNG	0.56	MEDC	0.56	EVNT	0.41	KIN	0.53	FLOW	0.47	MART	0.40	MONY	0.51	VARY	0.54
	AGRE	0.54	BODY	0.51	BLOK	0.56	WRIT	0.52	OUT	0.56	LITL	0.41	MALE	0.53	MART	0.47	MONY	0.40	PANG	0.51	AGRE	0.43
	SHRP	0.53	OUT	0.51	FORD	0.56	LACK	0.47	LITL	0.51	MART	0.41	BGIN	0.49	MONY	0.47	MTRL	0.40	SUB	0.51	ANML	0.43
	UP	0.53	WRIT	0.51	VARY	0.56	VIEW	0.47	BODY	0.51	MTRL	0.41	FALS	0.49	REST	0.47	OUT	0.40	BACK	0.44	SOMA	0.43
	PATH	0.46	LARG	0.49	NEAR	0.51	CRUX	0.43	EASY	0.51	PATH	0.41	MTRL	0.46	CRUX	0.39	REST	0.40	MALE	0.44	LADY	0.40

68

TABLE 15 -- PERCENT OF WORDS IN EACH CATEGORY FOR STUDENTS AND FACULTY: FREQUENCY LISTING OF CATEGORIES (CONT'D)

Y FREQUENCY

				FACULTY								STUDENT							
BOSTON STUDENT		BOSTON FACULTY		MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A	
CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE
LITL	0.45	END	0.49	PAST	0.51	MALE	0.43	LACK	0.47	BODY	0.41	DOWN	0.42	PATH	0.39	SEP	0.40	BGIN	0.44	END	0.43
VARY	0.45	LACK	0.46	YNG	0.51	OPEN	0.43	EVNT	0.47	BLUR	0.41	HEAT	0.42	BGIN	0.39	SHRP	0.36	PAST	0.44	CRUX	0.37
MONY	0.43	OPEN	0.46	MART	0.47	BACK	0.39	BACK	0.47	UP	0.41	LARG	0.42	WRIT	0.39	KIN	0.33	UP	0.44	HEAR	0.33
JOIN	0.36	BLOK	0.46	OPEN	0.47	NEW	0.39	BLUR	0.47	VIEW	0.41	OUT	0.42	FOND	0.31	LITL	0.29	VARY	0.44	MART	0.33
BACK	0.36	BGIN	0.42	MEDC	0.43	SEP	0.39	SUB	0.47	SHRP	0.33	EVNT	0.38	END	0.31	PANG	0.29	LEAD	0.38	BLUR	0.33
MALE	0.35	VARY	0.42	END	0.43	BODY	0.34	BGIN	0.47	ERTH	0.33	LITL	0.38	ANML	0.31	SOMA	0.29	BLOK	0.38	POWR	0.33
ION	0.35	PAST	0.39	LARG	0.38	WEAK	0.34	BLOK	0.42	VARY	0.33	SHRP	0.38	BLUR	0.31	BODY	0.25	PATH	0.38	REST	0.33
BLUR	0.33	PATH	0.39	CRUX	0.36	HEAR	0.30	OPEN	0.37	MALE	0.25	BLUR	0.34	UP	0.31	FOND	0.25	SEP	0.38	SHRP	0.33
EASY	0.33	NEW	0.37	LADY	0.34	DOWN	0.30	PANG	0.37	NEW	0.25	PANG	0.30	DAMG	0.23	MSMT	0.22	SHRP	0.38	MTRL	0.30
EVNT	0.31	PLAY	0.32	LEAD	0.34	LARG	0.26	LARG	0.32	END	0.25	CHIM	0.30	DOWN	0.23	PLAY	0.22	YNG	0.38	BGIN	0.30
LACK	0.29	BACK	0.30	DOWN	0.34	END	0.26	LIVE	0.32	WEAK	0.25	HEAR	0.26	LIVE	0.23	AUGH	0.22	AFAR	0.31	FOOD	0.30
DOWN	0.29	HEAR	0.28	SEP	0.34	DAMG	0.26	ANML	0.32	EASY	0.16	DAMG	0.26	BAD	0.23	END	0.22	CRUX	0.31	PLAY	0.30
SEP	0.26	YNG	0.28	LIVE	0.30	PANG	0.21	DOWN	0.32	LACK	0.16	NEW	0.26	BODY	0.23	LACK	0.22	SOMA	0.31	QUIK	0.30
FOND	0.26	MALE	0.25	WRIT	0.30	PLAY	0.21	YNG	0.32	HEAT	0.16	COLM	0.26	PANG	0.23	MEDC	0.18	LARG	0.31	MSMT	0.26
PANG	0.25	AFAR	0.25	MTRL	0.21	ANML	0.21	MALE	0.23	PANG	0.16	SICK	0.26	PAST	0.23	HEAR	0.18	MTRL	0.25	CRIM	0.26
PAST	0.21	DOWN	0.23	AFAR	0.21	BGIN	0.17	HEAR	0.23	QUIK	0.16	LIVE	0.23	POWR	0.23	LARG	0.18	HEAR	0.25	DAMG	0.26
SOMA	0.21	ANML	0.23	PANG	0.21	PAST	0.17	REST	0.23	REST	0.16	FOND	0.23	FOOD	0.23	LAW	0.18	REST	0.25	DOWN	0.23
MART	0.19	MTRL	0.21	FALS	0.17	AFAR	0.17	END	0.23	AFAR	0.16	GLAD	0.23	MSMT	0.15	BLOK	0.18	LIVE	0.25	LARG	0.23
LARG	0.19	KIN	0.21	SICK	0.17	SICK	0.17	DAMG	0.18	SICK	0.16	END	0.19	SEP	0.15	DOWN	0.18	LITL	0.19	PANG	0.23
DAMG	0.19	SOMA	0.21	FLOW	0.17	COLM	0.17	KIN	0.18	DAMG	0.16	JOIN	0.19	SHRP	0.15	WEAK	0.18	COVR	0.19	LACK	0.23
HEAR	0.18	LADY	0.18	AUGH	0.17	MTRL	0.13	THIV	0.18	DOWN	0.16	PAST	0.19	SICK	0.15	YNG	0.18	DOWN	0.19	EVNT	0.23
MECH	0.18	QUIK	0.18	FOND	0.17	FLOW	0.13	WEAK	0.18	LAW	0.16	POWR	0.15	LACK	0.15	NEW	0.14	AUGH	0.19	VEHC	0.23
REST	0.17	WEAK	0.18	BAD	0.12	GLAD	0.13	NEW	0.14	BLOK	0.08	SUB	0.15	BLOK	0.15	PAST	0.14	WEAK	0.19	AFAR	0.23
LIVE	0.17	PANG	0.16	PLAY	0.12	MECH	0.13	HOLW	0.14	FOOD	0.08	BACK	0.15	NEW	0.07	GLAD	0.14	QUIK	0.12	EASY	0.23
BAD	0.15	HOLW	0.16	LAW	0.12	REST	0.13	BULG	0.14	PAST	0.08	AUGH	0.15	LARG	0.07	EASY	0.14	FURN	0.12	HEAT	0.20
BGIN	0.15	AUGH	0.14	KIN	0.12	ION	0.13	PAST	0.14	MECH	0.08	LACK	0.15	MALE	0.07	DAMG	0.14	ANML	0.12	PAST	0.20
BLOK	0.15	BAD	0.11	BACK	0.12	FOND	0.13	FALS	0.14	SEX	0.08	CRUX	0.11	QUIK	0.07	BGIN	0.11	DAMG	0.12	MALE	0.20
QUIK	0.14	FALS	0.11	VEHC	0.12	COVR	0.13	PLAY	0.14	ION	0.08	MSMT	0.11	HOLW	0.07	DIRT	0.07	FLOW	0.12	JOIN	0.20
DIRT	0.14	BULG	0.11	COVR	0.08	AUGH	0.13	SOMA	0.14	SUB	0.08	PLAY	0.11	HEAT	0.07	HOLW	0.07	ASTH	0.06	LITL	0.20
END	0.13	DAMG	0.11	REST	0.08	LIVE	0.08	MSMT	0.14	BULG	0.08	BULG	0.11	SEX	0.07	FOOL	0.07	MART	0.06	ION	0.16
COVR	0.13	HEAT	0.09	DEAD	0.08	FOOL	0.08	MTRL	0.14	MSMT	0.08	BLOK	0.11	BACK	0.07	MECH	0.07	COLM	0.06	BULG	0.16
SICK	0.11	GLAD	0.09	SOMA	0.08	HOLY	0.08	LAW	0.14	KIN	0.08	QUIK	0.07	MECH	0.07	CLEN	0.07	GLAD	0.06	SUB	0.13
GLAD	0.11	REST	0.09	ERTH	0.08	SOMA	0.08	MART	0.09	VEHC	0.08	FOOD	0.07	VEHC	0.07	LIVE	0.07	SEX	0.06	BACK	0.13
AFAR	0.11	SICK	0.09	HOLW	0.08	DEAD	0.08	QUIK	0.09	CLEN	0.08	LAW	0.07	AUGH	0.07	FOOD	0.07	SICK	0.06	DEAD	0.13
WEAK	0.11	FOND	0.09	HEAR	0.08	DIRT	0.08	ERTH	0.09	GLAD	0.08	FOOL	0.07	FARM	0.00	AFAR	0.07	DIRT	0.06	FOND	0.13
HOLW	0.10	LAW	0.09	MSMT	0.08	KIN	0.08	FOOL	0.09	HOLY	0.00	MONY	0.07	GARB	0.00	HEAT	0.07	FARM	0.06	BLOK	0.13
PLAY	0.09	COVR	0.09	WEAK	0.08	MYTH	0.04	GLAD	0.09	COVR	0.00	BAD	0.07	EASY	0.00	SICK	0.03	BUG	0.06	COVR	0.06
AUGH	0.09	FLOW	0.07	EASY	0.08	BUG	0.04	BAD	0.09	PLAY	0.00	MUSC	0.07	COLM	0.00	BUG	0.03	LAW	0.06	LAW	0.06
FOOD	0.09	EASY	0.07	QUIK	0.04	MART	0.04	SEX	0.04	FURN	0.00	DIRT	0.07	FURN	0.00	BAD	0.03	VEHC	0.06	AUGH	0.06
MSMT	0.07	LIVE	0.07	ION	0.04	THIV	0.04	FOOD	0.04	LIVE	0.00	EASY	0.07	MUSC	0.00	SUB	0.03	BAD	0.06	LIVE	0.06
FLOW	0.07	MSMT	0.04	HEAT	0.04	FALS	0.04	SICK	0.04	DIRT	0.00	HOLW	0.07	ASTH	0.00	MALE	0.03	BULG	0.06	BAD	0.06
HEAT	0.06	MUSC	0.04	DAMG	0.04	VAPR	0.04	ASTH	0.04	FOND	0.00	WEAK	0.07	NSCR	0.00	FALS	0.03	FOND	0.06	MECH	0.06
FALS	0.06	CLEN	0.04	MALE	0.04	WEA	0.04	CLEN	0.04	FLOW	0.00	ION	0.03	MYTH	0.00	CHIM	0.03	EASY	0.06	WEAK	0.06
VAPR	0.05	MYTH	0.04	[illegible]	0.00	BLOK	0.04	FURN	0.04	COLD	0.00	AFAR	0.03	DEAD	0.00	MSCR	0.00	ERTH	0.00	GARB	0.06
LAW	0.05	MECH	0.02	FURN	0.00	EASY	0.04	COLD	0.04	FALS	0.00	ASTH	0.03	BUG	0.00	GARB	0.00	NSCR	0.00	[illegible]	0.03
BULG	0.05	FOOL	0.02	GARB	0.00	HEAT	0.04	FARM	0.04	MSCR	0.00	MECH	0.03	CHIM	0.00	ASTR	0.00	HSCR	0.00	ERTH	0.03
ASTH	0.03	DEAD	0.02	SIP	0.00	SIP	0.00	VEGT	0.04	SIP	0.00	TRIV	0.03	SIP	0.00	SIP	0.00	SIP	0.00	THIV	0.03
TRIV	0.03	CRIM	0.02	BULG	0.00	LAW	0.00	AUGH	0.04	BAD	0.00	VAPR	0.03	AFAR	0.00	FURN	0.00	GARB	0.00	FURN	0.03
HOLY	0.03	WEA	0.02	MYTH	0.00	COLD	0.00	FLOW	0.04	FOOL	0.00	FLOW	0.03	EVNT	0.00	FLOW	0.00	ION	0.00	SEX	0.03
[illegible]	0.03	HOLY	0.02	CRIM	0.00	CHIM	0.00	CRIM	0.04	BUG	0.00	FURN	0.03	DIRT	0.00	MUSC	0.00	DEAD	0.00	MUSC	0.03

TABLE 15 -- PERCENT OF WORDS IN EACH CATEGORY FOR STUDENTS AND FACULTY: FREQUENCY LISTING OF CATEGORIES (CONT'D)

BY FREQUENCY	BOSTON STUDENT		BOSTON FACULTY		FACULTY								STUDENT									
					MERIDEN		BRIDGE-PORT		NYC A		NYC B		MERIDEN		BRIDGE-PORT		BOSTON		NYC A		NYC B	
	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE	CATG	%-GE
	CLEN	0.03	GAMB	0.02	FOOL	0.02	FARR	0.02	ION	0.00	NSCH	0.00	MANT	0.03	SUB	0.02	QUIK	0.00	MEAT	0.00	DIRT	0.03
	MYTH	0.02	SIP	0.00	CLEN	0.02	FURN	0.00	GARB	0.00	ANML	0.00	BUG	0.00	ERTH	0.02	COVR	0.02	PLAY	0.00	FLOW	0.03
	ERTH	0.02	SEX	0.00	COLD	0.20	BULG	0.00	HOLY	0.00	CHIM	0.00	NSCH	0.00	HSCH	0.00	COLD	0.00	MSMT	0.00	FABR	0.00
	VEGT	0.02	THIV	0.00	THIV	0.00	QUIK	0.02	MYTH	0.00	TRIV	0.00	SIP	0.00	THIV	0.00	THIV	0.00	THIV	0.00	SIP	0.00
	VEHC	0.22	CHIM	0.00	GLAD	0.00	BAD	0.00	MECH	0.20	COLR	0.00	FABR	0.00	COVR	0.00	NSCR	0.00	FALS	0.00	HSCR	0.00
	DEAD	0.02	ASTR	0.00	FOOD	0.00	FOOD	0.00	FOND	0.00	GARB	0.00	HOLY	0.00	GLAD	0.00	HOLY	0.00	HOLW	0.00	ASTR	0.00
	CHIM	0.02	VAPR	2.00	VAPR	0.00	HSCR	0.00	VAPR	0.00	VAPR	0.00	HSCR	0.00	VAPR	0.00	VAPR	0.00	VAPR	0.00	VAPR	0.00
	WEA	0.01	FABR	0.00	MECH	0.00	MUSC	0.00	DIRT	0.00	FABR	0.00	CLEN	0.00	FOOL	0.00	ION	0.00	COLD	0.00	FOOL	0.00
	BUG	0.01	VEGT	0.00	VEGT	0.00	VEGT	0.00	SIP	0.00	VEGT	0.00	VEGT	0.00	VEGT	0.00	VEGT	0.00	VEGT	0.00	VEGT	0.00
	SIP	0.01	VEHC	0.00	ASTR	0.00	VEHC	0.00	VEHC	0.00	MUSC	0.00	VEHC	0.00	ION	0.00	VEHC	0.00	CLEN	0.00	HOLY	0.00
	MUSC	0.01	ION	0.00	DIRT	0.00	HOLW	0.00	DEAD	0.00	DEAD	0.00	SEX	0.00	FALS	0.00	DEAD	0.00	MUSC	0.00	COLD	0.00
	COLD	0.02	FURN	0.00	NSCR	0.00	NSCH	0.00	HSCH	0.00	AGGR	0.00	MYTH	0.00	LAW	0.03	ANML	0.00	HOLY	0.00	GLAD	0.00
	HSCH	0.00	BUG	0.00	WEA	0.00	SEX	0.00	WEA	0.00	WEA	0.00	WEA	0.00	WEA	0.00	WEA	0.00	WEA	0.00	WEA	0.00
	FURN	0.00	HSCH	0.00	HOLY	0.00	MSMT	0.00	COVR	0.00	HOLW	0.00	GAMB	0.00	WEAR	0.00	SEX	0.00	FOOD	0.00	HOLW	0.00
	NSCR	0.00	DIRT	0.00	MUSC	0.00	GARB	0.00	MEAT	0.00	WEAR	0.00	COLD	0.00	CLEN	0.00	MYTH	0.00	CHIM	0.00	HSCR	0.00
	FABR	0.00	COLD	0.00	FABR	0.00	CLEN	0.00	NSCR	0.00	ASTR	0.00	COVR	0.00	BULG	0.00	JULG	0.00	MECH	0.00	MYTH	0.00
	SEX	0.00	HSCH	0.00	SEX	0.00	ASTR	0.00	BUG	0.00	MYTH	0.00	DEAD	0.00	HOLY	0.00	ERTH	0.00	MYTH	0.00	SICK	0.00
	GAMB	0.00	FOOL	0.00	HSCH	0.00	ERTH	0.00	MUSC	0.00	YNG	0.00	ERTH	0.00	COLD	0.00	FABR	0.00	FOOL	0.00	CLEN	0.02
	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00	ZZ31	0.00
	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00	ZZ99	0.00

70

A. Reduction of Category Profiles

The initial step in this type of analysis is to unburden the data of obviously non-discriminating categories. These are categories which a) do not have a reasonable number of words in them, i.e., have a low frequency of usage or no frequency of usage and thus would lead to spurious or zero order correlations, b) do not seem to discriminate between any natural groupings, e.g., faculty vs. students or between students, and c) appear to be discriminating but only due to spurious word categorizations, that is, a miscoding of a word, not contained in the program dictionary, into the wrong category. For example, the word "Spanish" is not in the program dictionary and was read by the computer as "spaniel" and thus improperly categorized as ANML (animal).

As indicated above, the number of categories used by the 11 groups ranged from 84 to 110. By application of the criterion for initial category rejection discussed above, the category profile was reduced to 78 common categories for all groups (see Table 18, 7-Factor Matrix for a listing of the remaining categories). Inspection of the intercorrelations among these categories revealed a substantial number of high correlations indicating that the paring procedure had not affected the stability of the overall data.

B. Principal Axis Factor Analysis

From a theoretical point of view and from experience with the preliminary study, there was reason to believe that the 78 remaining categories were not totally independent. Furthermore, there was reason to believe that some categories would be more powerful in discriminating between groupings, e.g., faculty and students, than other categories. In order to identify the clusterings of categories that exist when the categories are not independent and to determine the relative contribution of each category in discriminating between groupings, a factor analysis of the 78 category profile was undertaken.

Table 16 presents the eigen values and the percent of variance accounted for by each factor emerging in the analysis. It can be seen that 10 factors account for 100 percent of the variance and that each factor has an eigen value greater than one and can thus be taken seriously. This tight solution indicated that the data had not been compromised by the presence of a small number of cases (groups).

TABLE 16 -- EIGEN VALUES AND PERCENT OF VARIANCE ACCOUNTED FOR BY EACH FACTOR

FACTOR	EIGEN VALUE	% OF VARIANCE	CUMULATIVE PERCENT	INDICATION FOR n FOR FACTOR SOLUTIO
1	17.41	22.3	22.3	1
2	11.24	14.4	36.7	
3	9.97	12.8	49.5	3
4	8.02	10.3	59.8	
5	7.35	9.4	69.2	
6	6.54	8.4	77.6	
7	5.90	7.6	85.2	7
8	4.68	6.0	91.2	
9	4.10	5.3	96.4	9
10	2.77	3.6	100.0	

Although the presence of 10 statistically meaningful factors indicated that the 78 categories could be reduced to no more than 10 dimensions, two characteristics of the data indicated that a further reduction was possible and desirable. These were:

1. The fact that with only 11 cases (groups) the probability of many factors emerging is increased.
2. The last few factors showed relatively few categories with high loadings (greater than .60).

It was thus decided to attempt to reduce the number of factors by further statistical analysis.

C. Factor Reduction by Rotation

The pattern of drops in the eigen values and percent variance accounted for (see Table 16) indicated that the unique sets of dimensions could be obtained by 9, 7 and 3 factors respectively. Consequently, orthogonal factor analyses were performed to extract these 3 different factor solutions.[7] The results of these analyses are presented in Tables 17 - 19 respectively.

D. Choosing Optimal Number of Factors

The results of the 9, 7 and 3 factor analysis solutions led to the decision to discard the 9 factor solution and retain the 3 and 7 factor solutions. This decision was made because the 3 and 7 factor solutions met the following criteria:

- Simple structure -- both solutions had fewer categories loading highly on more than one factor.
- Variance equality -- the 3 and 7 factor solutions tended to have a more even distribution of variance accounted for by each factor.
- Singleton and doubletons -- there were fewer factors on which only one or two categories loaded highly.

---

[7] Orthogonal rather than oblique analyses were performed because there was no hypothesis about the nature of the factor structure and it was thus best to assume independence of factors.

TABLE 17 -- VARIMAX ROTATED FACTOR MATRIX -- 9-FACTOR SOLUTION

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR
•VAR001 YNG	-0.36436	-0.29526	0.04412	0.68274•	0.06579	0.01049	-0.12620	-0.16455	-0.488
VAR002 WAIT	-0.39315	0.23163	0.47379	-0.10811	-0.39935	0.27817	-0.16174	0.33892	0.4302
•VAR003 WORK	-0.58266•	-0.23449	-0.16306	-0.15178	-0.06067	-0.50152	0.42078	0.32141	0.1675
•VAR004 WHOL	-0.42554	-0.28007	-0.01740	-0.04441	0.09792	-0.31618	0.45857	0.01588	0.5912
•VAR005 WE	0.08902	-0.43225	0.69838•	-0.22678	0.42684	-0.21281	-0.17004	0.07531	0.0611
VAR006 VIEW	0.17714	0.21904	0.14383	0.11527	0.07401	0.92773•	-0.00285	0.07144	0.0242
•VAR007 VARY	-0.12173	0.11542	-0.49209	0.77342•	-0.26725	0.02269	-0.02690	0.21181	-0.1187
•VAR008 UP	0.44728	0.44689	-0.26963	0.23199	-0.12359	0.08178	-0.11718	0.56330•	0.0701
•VAR009 TRUE	0.13329	0.96709•	0.00165	-0.01523	-0.02495	-0.02939	-0.45034	0.10569	0.0319
VAR010 TIME	-0.13055	-0.25759	0.04974	0.45346	0.47140	0.40394	-0.14305	-0.24648	0.4759
•VAR011 TALK	-0.02034	-0.08038	-0.13051	0.11122	0.17984	-0.05286	0.07117	0.95011•	0.0253
•VAR012 SUA	0.94886•	0.10663	0.17959	0.07509	0.08767	-0.18323	0.08003	-0.04693	0.0027
VAR013 SOME	0.29503	-0.16811	0.25489	-0.38311	0.31095	-0.54159	0.46019	0.00177	0.2514
•VAR014 SOMA	-0.84947•	-0.04377	0.17098	0.17450	-0.08156	0.01420	0.32526	-0.18280	-0.2294
•VAR015 SOLE	0.16501	0.07232	0.90222•	-0.19267	-0.16941	0.08677	-0.03132	0.16630	0.2237
••VAR016 SIML	-0.36704	0.56441•	-0.04336	-0.62666•	0.20068	-0.03927	0.27404	-0.06051	0.1132
•VAR017 SHRD	0.75430•	0.39855	0.11019	0.06136	0.09996	-0.20982	0.00393	0.42510	-0.0379
VAR018 SEP	0.18579	0.48455	-0.09752	0.16941	-0.11093	0.08468	0.27169	0.44631	0.3913
•VAR019 REST	-0.53254	-0.14030	-0.44195	0.61113•	-0.17187	0.21747	-0.01708	-0.16376	-0.0739
•VAR020 POWR	0.63091•	0.30231	0.16211	-0.50092•	-0.09740	-0.27108	0.21009	0.30531	-0.0359
•VAR021 PLAY	-0.08188	-0.18700	-0.28006	0.03363	0.68971•	0.04046	-0.53473	-0.01054	-0.0594
••VAR022 PLAC	0.00505	0.33193	-0.10578	-0.05214	0.18459	-0.24508	0.62291•	0.68786•	0.1553
•VAR023 PATH	-0.03760	0.19624	-0.20245	0.84604•	-0.25433	-0.05609	0.15315	0.33176	-0.01517
•VAR024 PAST	0.73974•	-0.35668	0.19767	0.01551	0.14773	0.37554	0.23954	-0.22236	-0.0995
•VAR025 PAWN	0.10555	-0.53360	-0.11593	0.07158	-0.70704•	0.32013	-0.03851	0.24843	0.2915
•VAR026 OUT	-0.03175	-0.93141•	0.09738	-0.25485	0.05026	-0.14259	0.00967	-0.12497	0.1358
•VAR027 OPPO	0.08804	0.43189	-0.11314	-0.14887	0.47059	-0.67632•	-0.17162	0.16648	-0.0525
••VAR028 OPEN	-0.57527•	-0.11815	0.54498•	-0.12910	-0.16501	0.43121	-0.05087	-0.34194	-0.1156
•VAR029 NUMR	0.02153	-0.04623	0.30347	-0.03839	0.04538	-0.48236	0.04276	0.26079	0.7746
•VAR030 NO	-0.02475	0.02251	0.15095	0.13086	-0.03925	-0.36705	-0.88344•	-0.02177	0.2041
•VAR031 NEW	0.37420	0.01415	0.80966•	0.00005	-0.15067	0.25206	0.05416	-0.28634	-0.0952
VAR032 NEAR	-0.48580	0.16784	-0.19083	-0.54315	-0.45639	0.32259	0.22733	0.00856	0.0598
•VAR033 MUCH	0.56381•	-0.54401•	0.26259	-0.13887	0.04310	-0.01214	-0.11044	0.18191	0.0633
••VAR034 MTRL	-0.73913•	-0.12198	0.15036	-0.03514	0.07563	0.16116	0.03957	-0.16814	-0.5934
•VAR035 MOTV	0.26235	0.50239	0.09335	-0.16754	-0.03222	-0.68405•	-0.38192	0.01843	0.24
•VAR036 MONY	0.41974	0.20754	0.36934	-0.18820	0.57740•	0.13333	0.07289	0.02692	0.495
•VAR037 MEDC	-0.34953	0.04660	0.71656•	0.31042	-0.25153	-0.18236	-0.19948	-0.10818	-0.3072
•VAR038 MART	0.08178	0.15736	-0.11230	-0.44274	0.77706•	0.23898	0.20903	-0.11027	-0.0612
•VAR039 MALE	-0.05218	-0.02737	0.33305	0.36134	-0.69640•	-0.28084	0.07379	-0.11543	0.0039
•VAR040 LITL	0.41166	-0.10336	-0.09038	0.13948	0.64131•	-0.46059	0.02191	0.04603	-0.423
•VAR041 LEAD	-0.52555	0.31701	-0.56953•	-0.23033	0.00317	0.17056	-0.38066	-0.09666	-0.238
•VAR042 LARG	0.16711	0.37329	0.08552	0.01091	-0.08821	-0.19404	0.80879•	-0.01373	0.2657
••VAR043 LADY	-0.58725•	-0.39592	0.00904	0.16656	-0.34142	-0.05359	-0.06358	-0.05837	-0.58344
•VAR044 LACK	0.92380•	-0.23027	0.20175	-0.08990	-0.20016	0.06435	0.09686	0.09573	0.079
•VAR045 KIN	-0.19463	-0.84746•	0.07926	-0.04575	-0.21847	0.34900	-0.13858	-0.15042	-0.004
•VAR046 JOIN	0.58115•	-0.01422	0.02240	-0.35720	0.23744	-0.41134	0.50462	-0.03425	0.071
•VAR047 IN	0.09585	-0.09378	0.43238	-0.43659	-0.20200	0.35304	0.55874•	0.30916	-0.17653
••VAR048 IDEA	-0.02841	-0.23429	0.55097•	-0.08733	0.36817	0.05044	-0.21007	-0.60185•	0.13078
•VAR049 HOME	-0.24704	-0.67032•	-0.21707	-0.13411	-0.42021	-0.05275	-0.26103	-0.26966	-0.211
•VAR050 HEAR	-0.12131	-0.51307	-0.15364	0.23085	0.25319	0.01430	-0.62629•	0.01479	-0.031
•VAR051 HAVE	0.11757	-0.13550	0.23553	0.05153	-0.41824	0.77529•	0.10385	-0.09948	-0.275
•VAR052 GRUP	0.86033•	0.39649	0.06594	-0.15653	0.06654	-0.07016	0.18693	0.19176	0.0086
•VAR053 GOOD	0.01066	0.41322	-0.77921•	-0.13984	-0.05191	-0.04461	-0.36912	0.06463	-0.1789
•VAR054 GO	-0.37024	0.10044	-0.29972	-0.20249	0.28455	0.79271•	-0.07575	-0.09868	-0.00
•VAR055 FORW	0.18622	0.00277	-0.06704	0.06304	-0.94521•	0.15697	-0.16994	-0.19056	-0.116
•VAR056 FORM	0.69289•	0.08566	0.39716	-0.07290	-0.19362	-0.44511	0.20182	0.21291	0.120
•VAR057 FOND	-0.23743	-0.11221	-0.16649	0.20439	0.21119	0.21650	-0.35404	-0.36739	-0.71011
•VAR058 FLOW	0.05070	-0.73058•	-0.10852	0.04752	0.51107	-0.20560	-0.23006	-0.11195	-0.2832
•VAR059 FALS	-0.17514	0.28129	0.15585	0.76205•	0.07007	0.38590	-0.02270	-0.07694	0.335
•VAR060 EVNT	0.81011•	0.27992	-0.00209	-0.20275	-0.29056	-0.13779	0.10787	-0.12191	0.072
VAR061 EVER	-0.03566	0.38363	0.01649	-0.18184	-0.03169	0.35022	-0.48542	-0.25866	0.523
•VAR062 END	0.55172•	-0.46223	0.10211	-0.22049	0.04066	0.32021	0.16160	-0.20629	0.4301
•VAR063 EMPH	-0.08344	0.79233•	-0.32789	0.06130	-0.06357	0.43004	-0.00984	0.10681	0.1551
•VAR064 EDUC	0.82517•	-0.08847	-0.14591	0.12898	-0.10524	0.18444	-0.42508	-0.10038	-0.174
•VAR065 EASY	-0.20235	0.34158	0.25704	0.03476	-0.28609	0.08265	-0.07948	0.83011•	0.020
•VAR066 DOWN	0.21507	0.14319	0.07260	0.90063•	-0.05521	-0.09666	0.02234	0.11312	-0.294
•VAR067 CRUX	0.19985	0.31656	0.06087	-0.45759•	0.17150	-0.10051	0.02070	0.73783•	-0.0447
•VAR068 CRIM	-0.42029	0.20931	0.07709	0.69444•	-0.08313	0.35802	-0.06175	-0.23470	0.2789
•VAR069 COLR	0.39377	0.56750•	-0.10562	-0.09948	0.20536	0.50242	-0.09945	0.40266	-0.052
•VAR070 BODY	0.29520	0.11341	0.57119•	0.44909	0.09430	0.41128	0.19980	-0.06127	0.343
•VAR071 BLUR	0.76017•	-0.01993	-0.05102	-0.01580	0.14611	0.17796	0.29876	-0.20976	-0.045
•VAR072 BLOK	0.74594•	-0.14508	-0.01323	-0.05842	0.15272	0.35968	0.36056	0.35964	-0.0732
•VAR073 BGIN	0.26096	-0.20019	-0.01751	0.33507	0.26725	-0.01290	0.76944•	0.13156	0.2291
••VAR074 BACK	0.04315	0.28768	-0.19289	-0.59452•	-0.64716•	-0.07645	-0.05917	0.29834	-0.055
•VAR075 ANML	-0.04414	0.07499	0.46299	0.68825•	0.05967	0.20136	0.06153	-0.00989	-0.496
•VAR076 AID	0.37817	-0.32551	0.01655	-0.55910•	0.38531	-0.16752	0.35905	-0.22585	-0.02
•VAR077 AGRE	-0.05394	-0.24830	-0.51213	-0.32691	-0.00208	-0.74061•	0.06931	0.00312	0.0926
•VAR078 AFAR	0.24877	0.00552	-0.01979	0.07225	-0.15381	-0.06173	0.01373	0.91542•	0.2738

TABLE 18 -- VARIMAX ROTATED FACTOR MATRIX -- 7-FACTOR SOLUTION

		FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
VAR001	YNG	-0.38547	-0.32823	-0.28506	0.73278 •	-0.11141	0.00770	0.02460
VAR002	WAIT	-0.36239	0.28862	0.17548	-0.09598	0.54836	0.08419	0.41429
VAR003	WORK	-0.51102	-0.34393	0.67787 •	-0.22604	-0.21055	-0.19715	0.09709
VAR004	WHOL	-0.50476	-0.33341	0.63526 •	-0.14627	0.13932	-0.03133	-0.16201
VAR005	WE	0.14026	-0.48996	-0.00970	-0.12022	0.61209 •	-0.22920	-0.30542
VAR006	VIEW	0.14858	0.52333	-0.24955	0.19625	0.20147	0.56459	-0.11596
VAR007	VARY	-0.14058	0.20511	0.09730	0.72476 •	-0.55051	0.00449	0.23217
VAR008	UP	0.48972	0.59517	0.22100	0.22695	-0.33615	-0.09289	0.16053
VAR009	TRUE	0.16410	0.83383 •	-0.21005	-0.03009	-0.00437	-0.47226	0.01854
VAR010	TIME	-0.20900	-0.05484	-0.16068	0.46437	0.26472	0.20146	-0.54026
VAR011	TALK	0.08590	0.09424	0.59250	0.16271	-0.33532	-0.06165	-0.02226
VAR012	SUB	0.94842 •	-0.01727	0.05077	0.08095	0.16252	-0.11286	-0.09716
VAR013	SOME	0.32766	-0.41991	0.52964	-0.41740	0.27210	-0.22753	-0.32261
VAR014	SOMA	-0.85805 •	-0.13250	0.11533	0.14973	0.11639	0.11085	0.03637
VAR015	SOLE	0.21285	0.11838	0.12773	-0.13133	0.87969 •	-0.03639	0.21593
VAR016	SIML	-0.34543	0.43327	0.21271	-0.68794 •	0.03043	-0.09310	-0.28475
VAR017	SHRP	0.81715 •	0.33664	0.26553	0.07930	-0.01667	-0.28149	0.04891
VAR018	SEP	0.20966	0.58487	0.55454	0.10553	-0.04726	0.03790	0.06487
VAR019	REST	-0.59805 •	-0.02432	-0.13849	0.56474	-0.38130	0.23398	0.13341
VAR020	POUR	0.70097 •	0.17024	0.32817	-0.49889	0.07082	-0.19137	0.12352
VAR021	PLAY	-0.08213	-0.12152	-0.42228	0.10565	-0.29198	-0.18895	-0.67400 •
VAR022	PLAC	0.08632	0.01265	0.92952 •	-0.03533	-0.21649	0.00931	-0.13227
VAR023	PATH	-0.03516	0.24768	0.36197	0.79930 •	-0.21514	-0.04154	0.28270
VAR024	PAST	0.69049 •	-0.23595	-0.14425	0.08170	0.23241	0.55166	-0.18632
VAR025	PAIN	0.02041	-0.22737	0.00632	0.08891	-0.09330	0.46554	0.72078 •
VAR026	OUT	-0.14610	-0.89439 •	-0.03025	-0.21634	0.14040	0.15155	-0.01529
VAR027	OPPO	0.16050	0.14032	0.15122	-0.22055	-0.22026	-0.79374 •	-0.40478
VAR028	OPEN	-0.60375 •	-0.03851	-0.34975	-0.07597	0.57751	0.32301	0.13176
VAR029	NUMR	0.05703	-0.08577	0.57647	-0.10291	0.42558	-0.43697	-0.04890
VAR030	NO	-0.00560	0.00345	-0.44261	0.15484	0.16141	-0.72425 •	0.11797
VAR031	NEW	0.35772	-0.00926	-0.21408	0.06730	0.80216 •	0.20860	0.14295
VAR032	NEAR	-0.49304	0.28237	0.07517	-0.59430	-0.09891	0.36457	0.36810
VAR033	MUCH	0.68308 •	-0.54080	-0.02392	-0.04530	0.21674	0.12993	0.03716
VAR034	MORE	-0.72351 •	-0.17709	-0.26866	0.02557	-0.01020	0.14577	-0.00573
VAR035	MOIV	0.31637	0.22761	-0.04430	-0.20477	0.03947	-0.87064 •	0.07114
VAR036	MONY	0.42273	0.23519	0.18226	-0.16971	0.50634	0.01167	-0.62930 •
VAR037	MODL	-0.31920	-0.08282	-0.17899	0.36004	0.55249	-0.31748	0.35662
VAR038	[illegible]	0.08006	0.11794	-0.03006	-0.40797	-0.07135	0.21302	-0.82290 •
VAR039	MALE	-0.06136	-0.12539	0.10931	0.31000	0.30644	-0.16836	0.69980 •
VAR040	LITL	0.45004	-0.35278	0.02571	0.18926	-0.28345	-0.36434	-0.53720
VAR041	LEAD	-0.53581	0.36526	-0.44393	-0.24503	-0.55611	-0.07704	-0.02539
VAR042	LARG	0.16078	0.19327	0.72221 •	-0.10539	0.16510	0.09354	-0.02774
VAR043	LADY	-0.57658	-0.42576	-0.23084	0.20835	-0.18277	0.04987	0.44483
VAR044	LACK	0.90146 •	-0.17135	0.05928	-0.05176	0.20775	0.21355	0.19709
VAR045	KIN	-0.23761	-0.61736 •	-0.31497	0.02067	0.12847	0.48552	0.23965
VAR046	JOIN	0.59304 •	-0.25687	0.42732	-0.39587	0.02702	-0.09014	-0.27562
VAR047	IN	0.14355	-0.00465	0.37039	-0.37827	0.32540	0.54763	0.22831
VAR048	IDEA	-0.07806	-0.31908	-0.43589	-0.04027	0.68247 •	-0.03487	-0.40204
VAR049	HOME	-0.28191	-0.62529 •	-0.42332	-0.11852	-0.21451	0.10596	0.44300
VAR050	HEAR	-0.12977	-0.37264	-0.45410	0.30785	-0.17914	-0.14069	-0.16275
VAR051	HAVE	0.07605	0.11535	-0.30544	0.12318	0.22326	0.76444 •	0.39056
VAR052	GRUP	0.89000 •	0.30941	0.22014	-0.15470	0.03073	-0.05398	-0.08360
VAR053	GOOD	0.01190	0.42092	-0.29281	-0.17768	-0.78110 •	-0.23409	0.02965
VAR054	GO	-0.41552	0.37326	-0.34161	-0.16613	-0.18028	0.56765	-0.36043
VAR055	FORW	0.14437	0.08536	-0.31859	0.03603	-0.02468	0.16338	0.79570 •
VAR056	FORM	0.74287 •	-0.07712	0.40142	-0.09358	0.32605	-0.29799	0.22865
VAR057	FOND	-0.26865	-0.14597	-0.73014 •	0.28639	-0.29860	0.07361	-0.15415
VAR058	FLOW	0.05034	-0.78149 •	-0.29071	0.13413	-0.21043	-0.03121	-0.40409
VAR059	FALS	-0.23205	0.43922	0.02532	0.73422 •	0.28364	0.17032	-0.13509
VAR060	EVNT	0.79633 •	0.16993	0.02065	-0.24526	0.05983	-0.05694	0.21225
VAR061	EVER	-0.08626	0.55363	-0.40382	-0.20762	0.28286	-0.02934	-0.08346
VAR062	END	0.49019	-0.30325	-0.01298	-0.20940	0.31433	0.50221	-0.13998
VAR063	EMPH	-0.10111	0.92779 •	0.00923	0.00429	-0.22117	0.14368	-0.04082
VAR064	EDUC	0.79401 •	0.00757	-0.51493	0.18906	-0.15219	0.07348	0.11389
VAR065	EASY	-0.09253	0.50284	0.41110	0.08627	0.06986	-0.15226	0.22147
VAR066	DOWN	0.21436	0.08334	0.06960	0.91023 •	-0.08643	-0.12751	0.12433
VAR067	CULK	0.31773	0.34510	0.39311	-0.60475	-0.12130	-0.20884	-0.05849
VAR068	CRIM	-0.49137	0.34522	-0.09629	0.64812 •	0.22746	0.17096	0.00095
VAR069	COLR	0.42694	0.75369 •	-0.02637	-0.04535	-0.14853	0.20343	-0.20093
VAR070	BODY	0.25840	0.24063	0.14420	0.46747	0.67703 •	0.33349	-0.14986
VAR071	BLUE	0.71686 •	-0.04720	-0.02173	-0.00983	0.00722	0.33687	-0.22238
VAR072	BLOK	0.76337 •	0.00313	0.26477	0.00483	-0.07522	0.51515	-0.13795
VAR073	BGIN	0.24160	-0.30207	0.69256 •	0.29447	0.01844	0.38392	-0.31079
VAR074	BACK	0.09362	0.31496	0.07301	-0.62758 •	-0.23073	-0.09212	0.64484 •
VAR075	ANML	-0.03928	0.05050	-0.11335	0.76563 •	0.26210	0.11185	0.03210
VAR076	AND	0.37240	-0.48279	0.10489	-0.54935	0.05742	0.13269	-0.42375
VAR077	AGRE	-0.03339	-0.47257	0.24553	-0.41241	-0.50276	-0.45865	0.00408
VAR078	AFAR	0.33937	0.20931	0.59541 •	0.09232	-0.13204	-0.08423	0.26141

TABLE 19 -- VARIMAX ROTATED FACTOR MATRIX -- 3-FACTOR SOLUTION

		FACTOR 1	FACTOR 2	FACTOR 3
VAR001	YNG	-0.37056	-0.50297	0.45675
VAR002	WHIT	-0.13350	0.07432	0.26596
VAR003	WORK	-0.42557	-0.05508	-0.60052 •
VAR004	WHRL	-0.22168	-0.22397	-0.45880
VAR005	WS	0.45199	-0.47336	-0.31055
VAR006	VIEW	0.20851	0.15801	0.64414 •
VAR007	VARY	-0.41929	0.27727	0.49174
VAR008	UP	0.16283	0.80558 •	0.21972
VAR009	TRUE	-0.12455	0.75537 •	0.17481
VAR010	TIME	0.02587	-0.39207	0.35641
VAR011	TALK	-0.02358	0.40348	-0.16651
VAR012	SUB	0.87382 •	0.26063	-0.02478
VAR013	SOMS	0.53275	-0.08317	-0.75029 •
VAR014	SOMA	-0.63964 •	-0.38316	0.12766
VAR015	SOLV	0.51896	0.02024	0.14905
VAR016	SING	-0.30334	0.34942	-0.47312
VAR017	SHAP	0.63346 •	0.63420 •	-0.03318
VAR018	SEP	0.12463	0.73569 •	0.11942
VAR019	REST	-0.66858 •	-0.23101	0.47499
VAR020	POWR	0.59927 •	0.54253	-0.42409
VAR021	PLAY	-0.19547	-0.22916	-0.14797
VAR022	PLAC	0.11318	0.41831	-0.45503
VAR023	PATH	-0.20292	0.37719	0.50143
VAR024	PAST	0.84413 •	-0.29026	0.20240
VAR025	PANL	0.08916	-0.16707	0.34253
VAR026	OUT	0.20617	-0.79791 •	-0.38255
VAR027	OLD	-0.06708	0.43515	-0.63571 •
VAR028	OPEN	-0.25711	-0.54732	0.36401
VAR029	NUMR	0.23606	0.15595	-0.39778
VAR030	NO	-0.14985	-0.01919	0.03454
VAR031	NEW	0.64124 •	-0.22259	0.40892
VAR032	NEAR	-0.45857	0.12151	-0.07314
VAR033	MUCH	0.79682 •	-0.31505	-0.13083
VAR034	MIKL	-0.60025 •	-0.49414	0.11383
VAR035	MATV	0.06924	0.48335	-0.36839
VAR036	MONY	0.62929 •	0.19183	-0.15953
VAR037	MELC	-0.15566	-0.27704	0.37215
VAR038	MPRT	0.15264	0.01329	-0.38385
VAR039	MALE	-0.00268	-0.06331	0.32219
VAR040	LITL	0.31244	-0.04613	-0.38958
VAR041	LEAL	-0.81632 •	0.14456	-0.02160
VAR042	LABG	0.28573	0.40392	-0.18269
VAR043	LADY	-0.56564	-0.52867	0.17721
VAR044	LACK	0.91803 •	0.07724	0.04892
VAR045	KIN	-0.01298	-0.90424 •	0.18798
VAR046	JOIN	0.64024 •	0.14378	-0.63037 •
VAR047	IN	0.37534	0.00895	-0.02538
VAR048	IDEF	0.25991	-0.64403 •	0.02510
VAR049	HOME	-0.29971	-0.65164 •	-0.04073
VAR050	HEAR	-0.19382	-0.45976	0.09044
VAR051	HAVE	0.20695	-0.20541	0.70084 •
VAR052	GRUP	0.74795 •	0.60269 •	-0.12072
VAR053	GOOD	-0.47195	0.50509	-0.11893
VAR054	GO	-0.30067	-0.07535	0.25212
VAR055	FORW	0.00397	0.04676	0.45125
VAR056	FORM	0.75315 •	0.32771	-0.22282
VAR057	FOND	-0.39468	-0.44006	0.31266
VAR058	FLOW	0.07381	-0.69269 •	-0.30159
VAR059	FALS	-0.11918	0.10766	0.74441 •
VAR060	EVNT	0.64910 •	0.42236	-0.07325
VAR061	EVER	-0.09199	0.20787	0.23521
VAR062	END	0.71827 •	-0.30107	-0.02770
VAR063	EMEN	-0.30662	0.73153 •	0.35973
VAR064	ELMG	0.54696	0.08323	0.31718
VAR065	EASY	-0.14113	0.55399	0.12505
VAR066	DOWN	0.08344	0.16433	0.57635
VAR067	CRUX	0.15304	0.51931 •	-0.40939
VAR068	CRIM	-0.37609	-0.05301	0.72598 •
VAR069	COLR	0.22748	0.59415 •	0.24866
VAR070	BODY	0.55256	0.01911	0.58842
VAR071	BLUR	0.71000 •	0.06472	0.04179
VAR072	BLOK	0.76609 •	0.21307	0.05132
VAR073	BGIN	0.45376	-0.06315	-0.09017
VAR074	BACK	-0.13701	0.50088	-0.23022
VAR075	ANML	0.05933	-0.15661	0.58145 •
VAR076	AID	0.52124	-0.28904	-0.64752 •
VAR077	AGRE	-0.20925	-0.02731	-0.83362 •
VAR078	AFAR	0.22505	0.56185	-0.05989

- Total amount of variance -- the 3 and 7 factor solutions still accounted for a respectable amount of the total variance.
- Over-interpretation -- given the above considerations, these two solutions minimized the problem of over-interpretation.

As the above criteria did not distinguish completely between the use of the 3 or 7 factor solution, the ultimate choice had to be made by the ease of interpretation of the factors. The interpretation took two forms. First, the factors were interpreted with reference to the categories which loaded high on each factor. Secondly, the interpretation of the factors was done with respect to the groups that the factors might discriminate among. Initial inspection indicated some difficulty with several factors of the 7-factor solution, factor 7 in particular. Thus, the decision was made to apply an additional statistical test to ascertain the value of the remaining factors in the 7-factor solution.

E. Discriminant Function Analysis

Based on the differentiation between faculty and students observed in the preliminary study, and the fact that they were the most natural grouping in the data, a discriminant function analysis was performed to determine which factors could differentiate between the two groupings (faculty versus student). The factor scores matrix was used as the raw data in this analysis (see Tables 20 and 21 for the factor score matrix of the 3 and 7 factor solutions). Two separate discriminant function analyses were performed: one using the 7-factor score matrix and the other using the 3-factor score matrix. The results of the analysis using the 7-factor score matrix indicated that there were three statistically significant factors in the 7-factor solution -- numbers 1, 3 and 6 -- which clearly discriminated between the faculty and student groups. (Refer to Table 18 for categories which loaded on these three factors.) All three factors of the 3-factor solution were statistically significant and discriminated between the faculty and student groups.

TABLE 20 -- FACTOR SCORE MATRIX - 3-FACTOR SOLUTION

GROUP	FACTOR 1	FACTOR 2	FACTOR 3
Faculty:			
Boston	1.041335	.857520	- .37826
Meriden	1.834635	- .044783	.291055
Bridgeport	.260425	.360837	- .589400
New York City A	.066241	1.658632	- .186416
New York City B	- .639688	.180369	-1.902509
Student:			
Boston	- .252980	- .436706	.723200
Meriden	-1.115180	- .046573	1.681473
Bridgeport	- .835604	-1.890019	-1.087838
Boston	-1.336307	.900132	.124001
New York City A	1.120729	-1.312185	.248564
New York City B	- .143595	- .227209	1.076607

TABLE 21 -- FACTOR SCORE MATRIX - 7-FACTOR SOLUTION

GROUP	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7
Faculty:							
Boston	1.154232	.694787	.193543	- .619410	- .028638	.295948	- .872455
Meriden	1.639363	- .177453	.116825	.648443	.270493	.773153	-1.295864
Bridgeport	.934816	- .286763	- .855254	.031342	.138200	-2.427433	.644133
New York City A	.601362	.594697	1.713519	.536060	- .906877	- .435652	.733217
New York City B	-1.224071	- .242383	1.829533	-1.480580	.380431	- .485805	- .381805
Student:							
Boston	- .526249	.140135	- .726882	.003210	1.068946	- .213571	.902712
Meriden	- .965140	.228083	.261703	2.119655	- .628117	.489896	.665430
Bridgeport	- .868054	-1.969738	- .637425	.193916	-1.073254	- .233363	-1.332345
Boston	- .422857	1.395219	-1.298447	-1.217472	-1.643053	.605642	.242807
New York City A	.564002	-1.417512	- .116044	- .690438	.654945	1.508114	1.610051
New York City B	.887414	1.040938	- .481094	.475272	1.766944	.123072	- .895887

Four factors in the 7-factor solution did not discriminate between the faculty and students. It is possible, however, that the 11 groups could be broken down in other ways such as by city or region, and that the four remaining factors might discriminate between this type of grouping. Thus, two discriminant function analyses were performed on the 11 groups broken into three regions -- Boston, Connecticut and New York. The first analysis looked at the faculty and students combined and the second analysis considered the students alone. In neither analysis did any of the four factors significantly discriminate among the regional groupings. These results confirm the original hypothesis that the most fruitful comparison to make in this analysis is between the faculty and the student groups.

F. Final Choice of Dimensions

The 3-factor solution was finally chosen based upon the following considerations:

1. The 3-factor solution discriminated as well as the 7-factor solution between the faculty and student groups.
2. The three factors of the 3-factor solution were very similar to the three factors of the 7-factor solution that discriminated between the faculty and students, i.e., many of the same categories loaded on them.
3. Although the 3-factor solution accounted for a smaller amount of variance (.48%) than the 7-factor solution (.85%), the amount of variance accounted for by the 3-factor solution is statistically respectable.
4. All three factors of the 3-factor solution are interpretable, i.e., the relationship between the categories loading on these factors make sense.

G. Supplementary Analyses

In addition to the 3-factor analysis, other data will be employed when it can help in the interpretation. For example, the two following considerations will be made:

1. As the four non-discriminating factors from the 7-factor solution are real factors, they can be analyzed to see if they shed some light on themes that might be important to understanding the barrier problem.
2. Categories which loaded only moderately high (less than .60) on a factor, and hence were dropped from the solution, can be looked at if they were significant in the preliminary study.[8]

6.7 Results

A. Dimensionalization

The statistical analysis completed, one may now proceed to a determination of the dimensions which are being defined by the factors. As has been shown, much of the conversation in the focus group discussions concerning barrier problems can be summarized by means of three general factors or dimensions. The statistical analysis also indicates that the faculty and the students talk about these dimensions differently. The task in this section is to examine the meaning of the three factors. (Table 22 provides a schematic illustration of the analysis to this point.)

To determine the dimensions being defined by each factor, one must now see what categories appear in each factor, and also determine what is being spoken about in the categories. It is also necessary to consider the degree to which the faculty and students differ in their usage of the categories and, consequently, how they differ on the dimensions.

---

[8] The reader should recognize that factor analytic interpretation is an art. Many judgments are made as to the inclusion or exclusion of certain data. As judgments are fallible, it is necessary to examine them retrospectively. Such post hoc analyses are, of course, subject to verification by further work to substantiate their scientific merit. It should also be recognized that many of the statistical analyses in this study were done with a minimum number of cases and are hence subject to very qualified interpretation. The authors have attempted to explicitly qualify those interpretations when they appear boldly in the text. In general, only conclusions which seem merited in light of the nature of the data are stated without qualification.

TABLE 22 -- SCHEMATIC OF DIMENSIONALIZATION PROCEDURE

From a specific group's conversation: → WORDS

Words categorized by concepts comprise: → CONCEPT CATEGORIES

Categories are subjected to factor analysis and load on: → FACTOR

Factor comprised of categories defines: → DIMENSION

The procedure is as follows:

1. From a specific group discussion, such as the faculty or students, the words are taken.
2. The words are coded by means of the concept dictionary into concept categories, such as GRUP, SOLE, etc.
3. The clustering relationships among the categories (the factors) are determined and the number of factors significant for the data is established.
4. Each factor, examined according to the content of the categories and their meanings, and the more general idea presented by the meaning of the whole group of categories combined, defines the dimension.

As was previously mentioned (Section 6.6-E), the discriminant function analyses performed showed no differentiation between student or faculty groups according to geographical regions or specific groups themselves. Thus, the discussion of the results will consider all student groups (total of 6) as one unitary group, and will also consider all faculty groups (total of 5) as one unit.

Table 23 presents the three general factors and indicates the categories which loaded on the respective factors, and the percent of words used by the faculty and student groups in each of the categories. Factor 1 shows that the 19 concept categories have a general idea in common. All of the categories load greater than .60, indicating a strong association with the general meaning of the factor. To evaluate the contribution of an individual category to the meaning of the factor, the percent of all words appearing in that category and the degree to which the faculty and student groups differ in the frequency of use of that category is considered. For example, in Factor 1, the category GRUP is used very frequently by both groups yet the faculty uses it more than the students. Note that some category loadings are positive and some are negative. In general, this means that the group (faculty or student) that uses the positively loaded categories more frequently than the other group, will use the negatively loaded categories less than the other group.

Following the schematic in Table 22 the categories within each of the three factors will now be defined. Where appropriate for a particular category, the key words which give specific meaning to a category will be included in the category description. Otherwise, the reader may refer to Appendix D and E, where all the major words used in a category by both faculty and students are listed.

The following description of the dimensions being defined by the factors gives the reader a brief interpretation of the factor before listing the category descriptions.

FACTOR 1. Definition of the Problems

This factor involves the perception and definition of the problems of minority students by the faculty and the students. There appear to be three subgroupings in this factor. Although they are not totally clear or independent, it will help to label them for the purpose of analysis and discussion. The subgroupings are a) the definition of the problems, b) the perceptions of and reactions to the problems, and c) reactions dealing with the intensity, quantity, time and structure of the problems.

TABLE 23 -- FACTORS, CATEGORIES, AND FACTOR LOADINGS

FACTOR 1				FACTOR 2				FACTOR 3			
CATEGORY	FACTOR LOADINGS	CATEGORY FREQUENCY FACULTY	CATEGORY FREQUENCY STUDENT	CATEGORY	FACTOR LOADINGS	CATEGORY FREQUENCY FACULTY	CATEGORY FREQUENCY STUDENT	CATEGORY	FACTOR LOADINGS	CATEGORY FREQUENCY FACULTY	CATEGORY FREQUENCY STUDENT
SUB	.87	.78	.18	UP	.81	.73	.56	VIEW	.64	.89	.96
SHRP	.60	.84	.41	TRUE	.76	1.28	1.20	HAVE	.70	1.69	2.14
POWR	.60	1.39	.70	SHRP	.68	.84	.41	FALS	.74	.11	.18
PAST	.84	.30	.22	SEP	.73	.61	.38	CRIM	.73	.00	.10
NEW	.64	.38	.47	GRUP	.75	2.71	1.58	ANML	.68	.32	.63
MUCH	.79	1.59	1.27	EMPH	.73	1.62	1.64				
MONY	.63	.97	.53	CRUX	.62	.68	.46				
LACK	.92	.48	.28	COLR	.69	.79	.51				
JOIN	.64	.98	.38								
GRUP	.75	2.71	1.58								
FORM	.75	1.87	1.34								
EVNT	.65	.79	.36								
END	.72	.37	.25								
BLUR	.71	.73	.42								
BLOK	.77	.36	.17								
SOMA	-.64	.20	.58	OUT	-.80	.60	.64	WORK	-.60	1.79	1.75
REST	-.67	.13	.35	KIN	-.80	.16	.69	SOME	-.75	1.58	.91
MTRL	-.60	.20	.50	IDEA	-.64	6.12	6.54	OPPO	-.64	2.41	1.94
LEAD	-.82	.70	1.14	HOME	-.65	2.89	3.84	JOIN	-.63	.98	.38
				FLOW	-.69	.09	.09	AID	-.65	2.71	1.84
								AGRE	-.83	1.05	.72

Problem Specification

SUB -- The object of concern is identified by this category -- that is, "minority." The faculty clearly labels the students as minority far more often than the students label themselves.

GRUP -- This category also refers to "minority" -- again, to a much greater degree for faculty than students.

Taken in combination, these two categories (SUB and GRUP) suggest a rather impersonal approach by the faculty to regard the students as a group -- minority group -- (versus the individualistic approach of the students, see discussion of additional factor 5).

JOIN -- This category reflects the faculty's emphasis on recruiting of students -- the problem of how to get them into the program.

MONY -- MONY refers to the problem of "financial aid" for students, but an interesting distinction is made between the faculty and the students. While the faculty devotes twice as much time to a discussion of financial aid, they are regarding it as a problem already solved -- that is, the faculty seems to feel that the aid is there, and money is not a barrier for the minority students. Yet the students refer to words such as "pay" and "spend" which suggests their concern of "how can I pay for my education?"

BLUR -- This category encompasses words such as "problem", "confuse", "wonder", and "question." Again, there is a distinction between the kinds of problems seen by the two groups. The faculty talk about the problems of finance and recruiting while the students see their problems of course work and careers as most important. Students are also more "confused", "wondering" and "messed up" with regard to their problems.

SOMA, MTRL -- These two categories support the hypothesis generated by the BLUR category as they contain words relating to courses -- "biology", "anatomy", etc., and have higher frequencies for students than the faculty.

Perceptions and Reactions

LACK -- This category suggests a difference in the perceptions of the two groups as to what the students need and what the problems are. The faculty see the need for financial aid and remedial academic work, while the students feel they need counseling as well as scholastic help. The faculty also identify the concern of losing bright minority students, particularly to other schools, while the students are concerned with losing credits or being lost in a course.

LEAD -- LEAD refers to structures, offices and people in authority. However, the two groups use this category differently. The faculty refers to words such as "coordinate", "discipline", "director", and "administration" while the students predominantly talk about "teacher", "parent", "boss", etc. The students also appear to be more concerned with authority, as the category frequency for student LEAD is 30 percent higher than the faculty frequency.

EVNT -- The faculty use this category twice as much as the students and refer to words such as "experience", and "happen." A closer analysis of the discussion content shows a faculty belief in experience as a solution to the problems of the students -- and the inference seems to be an impersonal approach of the faculty toward solving student problems.

POWR -- POWR contains the reference to "graduate" and is used to a much greater extent by the faculty. The faculty appear to attribute power to the minority students to get into school because of their minority status and, consequently, to have "power" when they graduate -- to get a job, etc. However, the students do not reflect the same idea, and are not even sure at this point that they will graduate at all.

BLOK -- BLOK contains references to "difficult" and "barrier." The faculty use this category more often, but the frequency is not outstanding. Both faculty and students identify the barriers of money and insufficient academic preparation of students. The faculty also mention the geography barrier which inhibits some students from entering schools far away from home. Students also identify exams and licensing procedures for certificates in allied health fields as barriers.

REST -- Contains the words "sit", "wait", "stay" and is used more by the students, possibly because they have a greater feeling that they are not going anywhere in school or with a career. Thus, REST reflects a lack of movement.

Intensity, Structure, Quantity and Time

JOIN -- The category JOIN also reflects an intensity difference between the faculty and student groups. The word feel, which appears in this category is used almost twice as much by the faculty and reflects their strong comments with regard to student problems. Students, on the other hand, tend to qualify their comments to a greater extent. (See OPPO, Factor 3)

SHRP -- This category supports the intensity dimension brought out by JOIN. The faculty use twice as many specifying words such as "certain", "particular", and "point." This may be partly stylistic, in terms of the language used by this group, but it still suggests a more definitive position on the part of the faculty.

FORM -- The faculty appear more concerned with the structure, form and technique of the educational "programs" than students. (This suggests that the students see the program parts -- courses, work, etc., while the faculty see education in terms of the overall program and planning that is involved.)

NEW, PAST -- These categories reflect the time orientation of the two groups. The students use the word "now" more than the faculty, and only use PAST when refering to "older" friends, relatives, etc. The faculty is not as immediately oriented as the students are, and use PAST more often, particularly when referring to problems of students which the faculty seem to discuss almost as if the problems are "already" solved.

MUCH -- Faculty use this category more frequently -- which refers to "more", "much", "often." They appear to be talking about the quantity of problems of the students -- more need for academic help, for example, or simply as having many problems in general. Students also refer to their problems, but tend to define the problems instead of quantifying them.

FACTOR 2. Perception of People in Relation to the Problems

This factor deals with how the faculty see the students and how the students see themselves in relation to the problems. Whereas in Factor 1, the central focus was the problem, in the following categories the central focus is the student. The categories that load on this factor are defined as follows.

GRUP -- This category, as previously shown, refers most often to "minority" -- a definition used nearly twice as often by the faculty.

COLR -- The emphasis in this category is the word "black" and is again used by the faculty more frequently. This may suggest the perception of the problem related to people as a color problem.

EMPH -- This category shows a stylistic characteristic of the language of the two groups. The words "even", "really", "too" and "very" are used about equally by both faculty and students. As a variable, the category seems simply to describe the emphatic way in which both groups talk about the "people problem."

TRUE -- This category overlaps with EMPH. The word "really" is used twice as much by the students -- suggesting a greater defensiveness on the part of the students. The students are seen in a quest for reality and truth ("What is really happening?"), whereas the faculty use of TRUE is in the emphasis of real things.

SHRP -- The faculty use more words in this category and seem to indicate a more specific and more definite way of talking about problems of people. Again, this may be a style difference in the language of the two groups.

CRUX -- The CRUX category contains words such as "qualify", "importance", "main" and "special." However, the faculty use of this category differs considerably from the student use. Qualifications of the students, necessary to get into the programs, are talked about by the faculty. The students, on the other hand, are concerned with more basic, personal problems such as special courses, special education and the main program they are involved in.

UP -- This category is used more frequently by the faculty with reference to words such as "up" and "over" in respect to the faculty's interest in students getting ahead, getting over their problems and excelling. (Students rarely reflect this goal orientation.)

SEP -- SEP refers to words such as "leave", "deal", and "division." Analysis of the context of these words indicate a concern by the students about leaving friends or their homes -- a comfortable situation -- when they go to school. The faculty is also concerned about students breaking away from the home situation, but in the sense that they (students) must get rid of home problems to facilitate their education. (Again, the impersonal approach by the faculty in dealing with a student problem.)

IDEA -- IDEA is characterized by words such as "know", "because", "study", and "advise." Although the category is used almost equally by the two groups, the particular word usage differentiates them. Students are concerned with counsel, advise and study to a much greater degree in terms of "where do I get advice?" and "how am I going to get through this program?" The faculty do not show these concerns and talk about overall concepts such as "program" to a greater degree. This category is also a stylistic language variable, evidenced by a greater use of because by the students -- a more defensive, justifying position than the faculty, who use the more emphatic justification term of think.

HOME -- Contains words relating to "school", "home", "college", "hospital", etc. Students use this category more than the faculty and seem to be perceiving themselves in an overall domain of past and present experience -- comprising high school, home life and, at present, college. The faculty looks at the student situation within a smaller arena -- the college.

KIN -- Students again use this category more frequently -- referring to "brother", "parent", "mother", and "family." These people appear to form the frame of reference for the student in terms of experience and the problems students are having. Faculty do not discuss this area.

OUT -- Both groups use the same words -- "out" and "drop."

FLOW -- "Drop" appears here -- for students particularly, referring to dropping courses.

FACTOR 3. Process of Solution

This factor involves what the faculty and students feel is involved in the solution of the problem, both on an empirical and personal level. The categories loading on this factor are defined as follows.

HAVE -- "Get", "got", "take" and "took" appear in this category and students use the words more frequently. Analysis of word usage context suggests a more urgent need for students to get into a course or get a good grade and to take what they can from the immediate situation. Yet although they need these things, students seem to approach them in a passive way, for example, "I'm in school -- what grade will I get or what course will I take?", and are confused as to how to get what they want. Faculty use the words in relation to a more active process of taking students into school or getting them to communicate well. Faculty seem less confused and more sure that these situations can be resolved and progress accomplished.

VIEW -- Comprises "look", "seem", "read", "television", "movies" and "film." Although students and faculty use the category almost equally, their orientations appear different. Students again appear confused -- trying to look at or for the solutions, while faculty is looking at the overall picture of admitting minority students. Students also refer to information media such as television, movies and film and the faculty does not.

FALS, CRIM -- These categories refer to "prejudice", "cheat" and "wrong" and concern mainly the students in terms of specific problems, that is, prejudice that may affect their academic performance or the problem of other students cheating. The frequencies are low, however, and these do not appear as major problems.

ANML -- "Kid" is the main word appearing in this category and is used most often by students when referring to acquaintances.

OPPO -- "But" appears here most often for both faculty and students and similar to ANML, is mainly a style of speaking category.

AID -- AID which refers to "financial aid", "help", "advise", "opportunity" and "give" points out an interesting distinction between the two groups. The tone of the faculty seem to be "we are giving you opportunities, grants, help and money" -- a paternal kind of inference -- "all this is here -- what is the matter?" Yet the students seem to say "we need help, advice, counsel and just do not know what to do." The two groups seem to be talking past one another on the very crucial ideas referred to in this category.

WORK -- "Career", "job", "profession" and "salary" are some of the concepts which characterize WORK. Students dwell more on "work" -- course work and jobs, while the faculty emphasize the career aspect of work.

SOME -- This category also supports the previous conclusions concerning the different orientation of faculty and students with regard to people problems. The faculty use the word "percent" quite frequently, referring to percent of aid, percent of failure of the minority students and the percent of minority students in the school. This suggests an attitude on the part of the faculty to view problems and solutions relating to students as a statistical situation, specifically how can the "percentages" be changed to solve the problems. Students, however, are more concerned with the education process they are relating to now on a one-to-one confrontation basis. So, solutions to the problems are perceived in two different ways -- a statistical solution seems promising to the faculty but an individual solution more important to the students.

AGRE -- "Accept" appears here -- used more frequently by the faculty, and refers to accepting students into school.

JOIN -- Discussed previously in Factor 1, JOIN refers mainly to the interest of the faculty in recruiting -- getting students into the school.

Dimensional Profiles

This section will describe the differences between the faculty and student groups on each of the three major dimensions defined and identified above. Thus, one must ask:

1. How do the faculty and students define, perceive and react to the barriers to minority entry into the allied health field?
2. How do the major actors, faculty and students, perceive each other and each other's roles in this problem?
3. How do the faculty and students see the process of solving the problems?

1. How do the faculty and students define, perceive and react to the barriers to minority entry into the allied health field?

In the preliminary study of the single faculty group and the single student group described in Section 6.3, the faculty tended to see the students more impersonally, i.e., as a class or group members, with the class or group defining the problems. This is also brought out in this study (see SUB, GRUP). The faculty emphasize the students belonging to a minority group. This is further reinforced by the faculty's greater emphasis on the need to recruit more students in contradistinction to helping those in the program with their individual problems (see JOIN), and by the faculty's greater emphasis on financial aid as the obvious and available solution (see MONY). The students, on the other hand, are concerned with practical problems of course work (see SOMA, MTRL) and do not regard their money, educational or personal problems as solved (see MONY, BLUR).

Impersonalness and the different perspectives of the problems are carried through to those categories which seem to reflect more of a reaction to the problem than a problem definition. The faculty's concern over solutions to the problems is mechanical and non-individually oriented. They are concerned about losing bright students (see MUCH), financial aid (see LACK), and students gaining experience (see EVNT). While faculty do see the use of remedial academic work (see LACK), it is not accompanied by the emphasis on counseling cited by the students (see LACK). In looking for solutions the students tend to emphasize "teacher" (see LEAD) while the faculty looks to other administrative functionaries. This is in accord with the seeming inability of the student to deal with the total amorphous, impersonal institution, as seen in the preliminary study. One interesting, although not unexpected, reaction on the part of the faculty is to attribute part of the solution to a factor totally out of their control, namely, the ability of the student's minority status to solve the problem (see POWR). The students do not share this certainty. One general striking reaction on the part of the students is their tendency to reflect a lack of movement (see REST) and a stagnation because of their problems, while the faculty generally have the feelings that the problems are readily solvable (see MONY, EVNT).

Certain stylistic differences reflect attitudinal differences between the faculty and students. The faculty feel stronger about their definitions and reactions to the problem (see JOIN) and are able to talk about them with greater clarity and definitiveness (see SHRP). In line with the faculty's recourse to the institutional functionaries for solutions, they also place an emphasis on the structural aspects of education as part of the solution; i.e., programs, plans, etc. (see FORM). This is a global perception. The students, however, are perceiving the problem at the level of courses, work, etc. The faculty and students also differ in their temporal frame of reference; for the faculty the problems seem in the past, already solved or solvable (see PAST), while students concentrate on the immediate. The faculty, however, do not seem to be underplaying the magnitude of the problems (see MUCH). However, the category MUCH may refer to the quantity of problems rather than the magnitude of the total problem, if the derivation that mechanical workable solutions are available is valid.

Summary

The faculty and students approach the problems from different perspectives. Faculty look at the overall, gross situation -- the financial aid problem, the program problem, the recruiting problems, with an eye on the allied health career area in general. Faculty are somewhat more definitive in their discussion and better able to elucidate their ideas, which results in a colder cognitive and less personal approach to the situation. They emphasize institutional, administrative, and structural solutions to the problems, and regard them as easily solvable or solved.

Students, on the other hand, are concerned with their day-to-day problems, spending money, getting through courses and how they relate to the authority figures in their lives. They are oriented toward the immediate and a greater affective tone is characteristic of their discussion. While the faculty is defining the students as a group -- a minority -- which has problems, the students are defining their personal needs and problems.

2. How do the major actors, faculty and students, perceive each other and each other's roles in this problem?

Both faculty and students perceive students who have problems. To the faculty the students are an identifiable group, a minority (see GRUP) and predominantly black[9] (see COLR). The faculty see this group as having a past oriented problem in one case, specifically the entry qualifications (see CRUX) and also see minority students as posing a problem to the current program (IDEA) and as barriers to successful program operation (see UP). Even personal problems related to the student's home situation are seen as barriers (see SEP) to be dispatched as simply as possible. In summary, the group of students is there to accomplish a goal. This goal orientation model requires that as little effort as possible be spent on problems external to the program and these problems are preferably to be dealt with summarily before the students reach the program. That is, the faculty want to emphasize the qualifications necessary and want to insure that past personal ties do not interfer with achievement. The implicit assumption seems to be that the program structure, content and approach is adequate for the current educational task. Whether it is or not is not of importance to the students who see themselves involved in very personal problems with certain specifics of the program and the situation into which they have entered. They have problems with their courses (see CRUX), and they need advice and counsel and solutions to their study problems (see IDEA). They are concerned about their relations with their family and friends (see KIN, HOME and IDEA). The world in general is a confused place and the student seems to be uncertain of how to evaluate his relation to the program and its consequences.

---

[9] Although 4 groups contained Puerto Rican members, it is interesting to note that Spanish or Puerto Rican does not come up in conversation very much. It occurs in two categories, AFAR and PLAC on Factor 3 of the 7-factor solution. The fact that it doesn't load on GRUP or SUB, in which minority plays an important role, may indicate a subtle difference on who the faculty are considering as minorities, or as problem minorities.

Lastly, there is an interesting juxtaposition on the dimension of time. To the faculty the past and the future of the student is a problem. They see the past and the future of the student as problems that can easily be solved by essentially mechanical means such as taking in students with better qualifications and eventually helping the students obtain adequate positions after graduation (see next section).

For the students the problem is now. To them the near future is confused, with job uncertainty a major consideration. The present is a continuation of the past with concerns about relatives and friends and is also seen as generating its own problems of course work and money concerns which require personal attention, counsel and advice.

3. How do the faculty and students see the process of solving the problems?

The impersonal vs. personal, and present vs. past and future themes carry through to the possible solutions the faculty and students offer for the problems they perceive. This is not unexpected, for solutions are extensions of problems. As in the preliminary study, students see a solution to their immediate course and school related problems (see WORK) through advice and counsel and other course work related mechanisms (see FALS, CRIM). They emphasize a need to clear up confusion with respect to their personal roles, course work and personal problems (see HAVE, VIEW, SOME). The students desire immediate solutions which deal especially with courses and school work (see HAVE). In sum, for the students the solutions lie in an individual approach, to help them with money, course work,and to provide advice and counsel with respect to personal, day-to-day problems, and clarify the immediate confusion about navigating through school. The faculty see "statistical solutions" (see SOME) involving a more active recruitment process (see HAVE) in providing financial aid and, in a minor way, by focusing on the career aspects of the students' effort.

Some Additional Factors

As indicated in the Result section, Factors 1, 3 and 6 of the 7-factor solution were essentially the same as the three factors to emerge in the 3-factor solution. The remaining four factors, however, seemed to point to other dimensions which are used in the discussion of barriers to the entry of minorities into the allied health fields. The discriminant analyses showed that these dimensions are not used uniquely by faculty or students, nor by faculty and students from various regions. As they do represent real dimensions characterizing the focus group conversations, and as there are some trends toward faculty-student differences, they are noted briefly here. Each factor will be referred to in terms of its position in the factor analysis (see Table 24).

FACTOR 4 -- This factor is characterized by its involvement with ranking, status and evaluation. Such categories as VARY, and PATH involving the words "grade" and "low" referring to ranking, and FALS and CRIM involving unfair ways to achieve grades, load on this factor. It would appear that the common concern expressed in this factor involves how one goes about discriminating among people. It represents a concern with the measurement of the problem. For the faculty it seems to involve an attempt to grapple with the problem of how to go about ranking or evaluating the problem persons, while for the student it seems to be the question of what is the system that is ranking them. Should this be a genuine concern, there are two implications. One, the existence of sufficient concern to favor discussion among faculty and the administration as to how to rationally evaluate the students' problems, and two, a dimension with which to begin to answer the students' confusion about their contemporary status. In general, the dimension indicates a need to establish a more flexible position on the part of both parties to assess the ranking problems related to school and course work.

FACTOR 5 -- This factor can be characterized as personal concern and personal identification. It involves the distinction between "we" and "I", words which appear in the categories of WE and SOLE. Personal identification is related to issues involving personal concern, e.g., "advice" and "counsel", words which occur in IDEA, and the emphasis on the present as it appears in the NOW category. Stylistically, personal concern is accompanied by explanatory words such as "think" and "because" (in the IDEA category). There is a trend for students to use "I" more than the faculty and for the faculty to use "we" more than the students. The former may represent the involvement with personal problems we observed in Factor 2 of the 3-factor solution, and the latter with the tendency for the faculty to see itself as a class, groping with another group (students) to achieve a solution. One difference observed in the preliminary analysis is also present here. The faculty say "think" more than the students and they say it in an emphatic and authoritative way, while the students say "because" more than the faculty, and, consequently, are more uncertain and qualifying of their points.

TABLE 24 -- POTENTIAL BUT UNSUBSTANTIATED ADDITIONAL FACTORS AND CATEGORIES FROM THE 7-FACTOR SOLUTION

FACTOR 2

	FACTOR	CATEGORY FREQUENCY	
CATEGORY	LOADINGS	FACULTY	STUDENT
TRUE	.83	1.28	1.20
EMPH	.93	1.62	1.64
COLR	.76	.79	.51
OUT	- .89	.60	.64
KIN	- .62	.16	.69
HOME	- .63	2.89	3.84
FLOW	- .78	.09	.09

FACTOR 4

	FACTOR	CATEGORY FREQUENCY	
CATEGORY	LOADINGS	FACULTY	STUDENT
YNG	.73	.36	1.04
VARY	.72	.59	.65
PATH	.80	.57	.56
FALS	.73	.11	.18
DOWN	.91	.28	.27
CRIM	.65	.00	.10
ANML	.77	.32	.63
SIML	- .69	1.78	1.71
BACK	- .63	.33	.33

FACTOR 5

	FACTOR	CATEGORY FREQUENCY	
CATEGORY	LOADINGS	FACULTY	STUDENT
WE	.61	6.78	9.43
SOLE	.88	5.22	9.30
NEW	.80	.38	.47
IDEA	.68	6.12	6.54
BODY	.68	.55	.55
GOOD	- .78	1.66	1.40

FACTOR 7

	FACTOR	CATEGORY FREQUENCY	
CATEGORY	LOADINGS	FACULTY	STUDENT
PANG	.72	.22	.28
MALE	.70	.25	.30
FORW	.80	.80	.90
BACK	.64	.33	.33
PLAY	- .62	.21	.17
MONY	- .63	.97	.53
MART	- .82	.39	.24

In general, this factor may indicate that personal concern is usually accompanied by uncertainty and that the people expressing such concern need bolstering. On the other hand, people who use "we" in a discussion tend to be more emphatic and authoritative, and perhaps more resistant to change.

FACTOR 7 -- This factor can be characterized as involving "status in time" and indicates marginally that people who worry about rank and status (as seen in the FORM category) do not emphasize money or aid in general. This may underscore the distinction made between the emphasis of the faculty on financial aid versus the emphasis of the students on counseling.

FACTOR 2 -- The categories on this factor are similar to those of Factor 3 of the 3-factor solution, and thus are explained there.

6.8 General Applicability of ACA

In this section, we will address three questions.

1. Was the ACA approach applicable to the type of focus group conducted on the issue of barriers to minorities to entry into the allied health fields?
2. Did the ACA approach enhance a basically qualitative approach to data collection and what is its generalizability?
3. Was the sampling method employed adequate for ACA analysis?

1. Is the ACA Approach Applicable?

To answer this question we should recollect the purpose of ACA. Automated Concept Analysis is geared to exploring the underlying dimensions of spoken language. It is a method of reaching beyond the specifics of conversation and thus does not catalogue instances or occurences of specific statements. Instead, it tries to distill the essential yet most general elements that are occurring in the conversation. ACA attempts to lay bare the central issues or central concerns which are moderating the discussion. Once these issues and concerns are distilled, it is the researcher's task to ask: "What are the particulars of this concern?" Examination of the specific words and the context of the words can then be used to develop quantitatively oriented instruments with which to measure the particulars with scientific precision. Was this goal accomplished? Were the central issues laid bare? Yes. The analysis revealed the basic structure of both the faculty and student approach to the barrier problem. In addition, ACA clearly sets forth the very basic differences between faculty and students on all critical dimensions. For both groups these differences were defined in terms of a) the approach, structure of composition of the problems, b) the perception of the central actor in the problem, the student, and c) the process of solution. These tend to be the three independent clusters of concern.

Our next question was, "would ACA determine whether specific groups differed on the central issues and if they differed what were their respective positions?" ACA again appeared to readily handle this task. To summarize, we first noted that the comparison dimension is defined as being the difference between the faculty and student groups. The ACA results then show us that the overall focus on problems and solutions differ. That is, to the faculty, the problem of barriers to minorities in the allied health field is essentially a statistical problem of a classified group -- the black minority -- which requires a goal oriented solution. The students, however, focus on very specific problem situations which involve them individually and thus require a solution specific to each problem. The two groups thus showed disparate orientations in their approach to the overall situation of minority problems. The faculty attend to the problems with an impersonal approach and orient their thinking in terms of a future solution of past problems. The students, though, are solely oriented to the present and to an individual approach. The respective positions on specific components of problems, perception and solutions which were also differentiated by ACA have been previously discussed. Thus, ACA has shown an application of respectable proportions to this topic.

2. Does ACA then Enhance a Qualitative Approach and What is its Generalizability?

As has been shown, the ACA approach is readily applicable to the focus group discussion and enables one to outline the critical issues underlying the topic. ACA thus has the advantage of overviewing the entire topic and abstracting its most essential elements. The insights and implications discussed in the previous section indicate that ACA provides an efficient and scientific means of extracting central issue material about complex topics from qualitative data. Purely qualitative analysis of such data may easily suffer from an inability to crystallize components of such a complex issue. Therefore, although a qualitative analysis may generate the specifics of a problem, ACA can enhance this approach by providing an insight to the underlying central issues.

Once the underlying central issues are developed, one must ask the following empirical question: "To what degree are each of the elements important for different groups of faculty and students?" The ACA approach can also generate further inspection of these elements. Following initial analysis, after the critical issues have been outlined, one would ordinarily use the specific variables, which proved cogent to the issues according to ACA, to design attitude scales. For example, as discussed in Section 1, minority students' problems encompass such variables as the need for financial aid, the need for counseling and a willingness to achieve success in the future. The attitude scales would then be administered to the various groups whose attitudes are crucial to the issues, in an attempt to further define discrepant perspectives which may hamper the problem solutions.[10]

In this study the full scale application of ACA was not realized. The construction of scales related to the central issue and their administration to, for example, potential students and various classes of faculty would have taken basically qualitative data to its fruitful quantitative conclusion.

In summary, there are two benefits to be derived. Qualitative data, collected for the express purpose of ACA or qualitative data collected for other purposes can be fruitfully subjected to ACA to reveal significant general concepts and to determine how different groups of people relate to these concepts. Rough orderings of concerns and differences between groups can be explored and tentative conclusions drawn and implications offered. This is what has been done in this report. In addition, greater quantification can be achieved by developing scales based on the variables related to the central issues (in the terms discussed above -- categories loading on the significant factors). These scales would then be available for cross-sectional analysis by administration to a variety of new groups or longitudinal analysis to track the problem over time.[11]

---

[10] This procedure worked very well in designing attitude scales to predict preferences for TV shows. Actually, once a variable such as "need for counseling" has been identified, the actual conversation about the variable would be examined for use in the development of the attitude scales.

[11] Recall that one of the factors of the 7-factor analysis common to both student and faculty was the factor of rank and evaluation. Both groups were saying there is a need for measurement to determine their respective positions. Perhaps, the last ACA step can serve this function.

3. Was the Sample Adequate?

Although a parametric study was not done, two factors point to the adequacy of sampling only a small portion of the total conversation of any one group. One, the results from a 25 percent sample of the focus group conversations seem to yield data very similar to data from a 50 percent sample. In fact, most categories that were significant with a 50 percent sample were also significant with a 25 percent sample.[12] Two, the 25 percent sample was sufficient to yield stable factor structures with very few cases (a case is defined by separate groups in this analysis). This bodes well from a cost/efficiency point of view.

6.9 Comparison with Preliminary Study Results

The comparison of the data and the conclusions derived from the preliminary study with the data and conclusions of this study yields mixed results and implications. To some extent the overall conclusions and implications are the same. Two groups chosen at random from the 11 available groups seem to be sufficient for drawing overall conclusions. On the other hand, differences on the structure of the overall problem and in various particulars did emerge and these may have implications for both the understanding of the problem and the development of scales for future measurement. The significant similarities and differences are as follows.

The structure of the problem revealed clinically in the preliminary study involved a) the time and structure perspective in which both the faculty and students saw the problem, b) the type of needs of each group, c) how each group saw each other, and d) the style in which they expressed themselves. This study revealed a somewhat different structure. The first factor -- definition of the problem -- pulled together the first three factors found in the preliminary study. The second factor -- perception of people in relation to problems -- included a large number of the categories found in the "perception of others" factor found in the preliminary study, but increased in richness by pointing to the family frame of reference for the students and to the greater degree of impersonalness with which the faculty perceives the students. The time dimension, which was a part of the first factor in the preliminary analysis and implied on this factor, leads to a very fruitful hypothesis. It appears that the past and future orientation towards problems forms a significant frame of reference for the faculty. This in turn becomes very significant when considered with the faculty's statistical approach to problem solution. It helps to explain the faculty's impersonal orientation. The third factor -- process of solution -- is a new factor which contains elements of all of the structures cited above. It simply crystallizes the area that the solutions are considered as a significant independent issue by both the faculty and students. The style factor of the preliminary analysis did not emerge as an independent factor, rather it cuts across and colors all these factors indicating that the faculty's colder cognitive, emphatic and impersonal style is likely to color the way they discuss the matters related to barriers to entry into the allied health field. In summary, the three factors that emerge from a statistical analysis using 11 groups seem to be simpler, more crystallized, and structurally more independent than those which were derived clinically using only two groups.

---

[12] This must be qualified by the fact that the 50 percent samples involved only two groups while the 25 percent sampling involved nine groups. The percent sample eventually may have to be related to the number of groups sampled.

If one were to overlook the difference in the structure of the problem described above, it could be said that either structure generated the essential differences between the faculty and student groups. These are the impersonal and system oriented, past and future oriented frames of reference of the faculty and the self-oriented, immediate solution needs of the students. However, once beyond this level, differences in emphasis are noted. These are:

- The perception of the institution as undifferentiated, which was found in the preliminary study, was not found in the major study. In fact, very little relating to the perception of the institution per se was found.
- The faculty emphasis on the power of the minority to solve the problem because they are a minority was found in this study and not in the preliminary study. This provides an interesting insight into the faculty belief in a certain type of power derivation from minority group status and a possible fallback position on the part of the faculty. It also suggests that should the problem become overwhelming, the faculty might rationalize inactivity by pointing to the resolving power of minority group status.

- In this study, the students place much greater emphasis on their confusion and their perception that they are getting no place. This confused state or feeling seems to override the focus for advice and counsel found in the preliminary study. (It may also account for the lessened focus on the nature of the institution observed above.)
- Unlike the preliminary study, the faculty seem to see the magnitude of the student problems. However, there is no indication that this alters the type of solutions they advocate.
- In this study a greater blame factor is indicated. The student is seen as casual, as the focus of the problem rather than only having problems. This may account for the faculty's justification of statistical solution.
- Even though the faculty's emphasis on worrying about the student's future was present in the preliminary study, the past-future frame of reference did not emerge clearly. In this study it emerges as a means of solving the problem rather than as a concern of the faculty for the individual student's future.
- Both the goal orientation model and statistical approach of the faculty to solving the "student problem" emerge in this study. Neither was clear in the preliminary study.
- Although weak, the need for measurement is expressed by both the faculty and students as a means of evaluating their position vis-a-vis their respective perceptions of the problem; i.e., the faculty in terms of how to evaluate the problem persons and for the students in terms of gauging their progress.

In sum, when one is dealing with a problem as significant as the barrier problem, it is highly likely that the general issues and concepts will be reliably expressed by and extracted from a small number of randomly chosen people. However, the nuances of the problem are most likely to be clarified by extending the analysis to a larger sample. When the purpose of the ACA analysis involves the construction of scales or making policy decisions one would be well advised to use a reasonably large number of groups.[13]

---

[13] The ultimate number of groups will depend on the number of levels one would intend to use in the analysis. Segmenting by three or four dimensions would require more groups than segmenting by one or two dimensions. Work in other areas has shown that using an ACA approach allows smaller group sizes thus allows an increased number of groups with the same number of total participants.

6.10 Implications and Conclusions

The section of this report previous to the Automated Concept Analysis method defines three major stages at which there are barriers to successful entry of minorities into the allied health field: in application, matriculation and completion. The ACA method proved itself to be readily applicable in elucidating underlying concerns which permeated the faculty and student discussions of these barriers. In particular, ACA was most useful in delineating issues which create barriers to successful completion of allied health programs. This is not surprising as the ACA analysis dealt with the discussion analysis of students who are already in these programs and thus, at this point, focus on their immediate concerns relative to being in school.

Conclusions from the analysis concerning the completion stage of an allied health program are as follows:

- In general, the faculty and students define different existing problems for students currently enrolled in the programs.
- The overall perception of problem situations differs for the students and the faculty. Students perceive specific problem situations as crucial, while the faculty tend to see only the macrocosmic problem areas.
- Students and faculty differ on a time dimension in terms of the effects of problems. Students are oriented to the immediate, day-to-day concerns, while the faculty cite past situations and future concerns in discussing the effects of problems on the students.
- There is a strong differentiation between faculty and students with regard to each group's perception of the people (students) who have problems. The faculty identify students with problems as a black minority group having difficulties in school; however, the students perceive themselves as individuals with problems, without an emphasis on their minority status.
- Finally, with respect to the solution each group advocates, there is again a differentiation. The faculty want to deal with this group on a statistical basis for solution, yet students seek a one-to-one approach in helping them find a solution.

These findings suggest that the perceptual and orientational differences between the students and the faculty is one cause of continuing barriers to minority students to successfully complete their education. The students' needs are seemingly unperceived by the faculty. One also has reason to believe that even if these needs should be forced into the collective institutional consciousness, the existing perceptual and orientational differences raise questions as to whether the faculty, unaided, would be capable of generating the types of solutions necessary to help the students.

The conclusions resulting from an examination of the results relevant to the completion barrier also generate an implication for the first stage in which barriers to minority students exist -- application. If the need-concern gap between students and faculty is too wide and thus results in great frustration and a high dropout rate of students, then word-of-mouth advertising is likely to be negative. Potential recruits may then become quite sensitized to existing conditions and consequently decide against application to allied health programs. However, this problem should be qualified by an hypothesis also generated from this analysis, that is, that a lack of knowledge about existing programs may also be a barrier to minority application to allied health schools.

Finally, the barriers to matriculation of minority students are elucidated by several conclusions from the ACA analysis.

- Both students and faculty identify the money barrier -- financial aid. However, while the students worry about where the money for their education is to come from and how they can manage a part-time job as well as school, the faculty discuss the percent of aid as existing in a readily available way and consequently not as a barrier producing problem.
- Both the students and the faculty also mention remedial work problems which students must overcome to matriculate. Yet, the students see the solution in terms of more tutorial help as opposed to the faculty, who suggest modification of entry requirements to insure sufficient qualifications.
- Lastly, the students identify home-life problems, which may hamper their matriculation, for which they seek some advice and counsel, while the faculty chooses to deal with the ties of the students to their family and friends by trying to divorce the students from these loyalties.

The implication from these conclusions points to non-compatible cognitive processes which differentiate the faculty and the students. The impersonal, colder cognitive outlook of the faculty appears to hinder their capacity to identify the affective nuances coloring the students' confused state of feelings. Consequently, the faculty and students tend to operate from quite varied frames of reference and are unable to join in a common solution for the problems minority students encounter as barriers to their entry into the allied health field.

7.0 CONCLUSIONS AND IMPLICATIONS

The purpose of this research program was to "identify barriers and propose solutions to the attainment of equal representation in post-secondary allied health education programs for minorities." The focus group methodology proved to be very effective in both the identification of barriers to minorities in application, matriculation and completion of post-secondary programs and also in the initial development and critique of proposed solutions to overcome these barriers. However, prior to the discussion of the development and critique of recommended solutions, it is necessary to reiterate three methodological constraints on these recommendations. First, the operational definition of barriers set forth in the RFP differentiates between those barriers which can be resolved or reduced through programs of public information,outreach and training versus those barriers which require widespread national reforms. This study was neither to address those barriers requiring widespread national reforms nor to recommend solutions which involve widespread national reforms. Thus, the data analyses and recommendations are oriented toward specific definable programs of action.

Secondly, the RFP authorized data collection from only minority persons presently enrolled in one of the following post-secondary allied health training programs:

- Dental Assistant
- Dental Hygienist
- Dental Laboratory Technician
- Dietary Technician
- Dietitian
- Inhalation Therapy Technician
- Medical Laboratory Technician
- Medical Records Librarian (Medical Record Administration)
- Medical Records Technician
- Medical Technologist
- Occupational Therapist
- Occupational Therapy Assistant
- Ophthalmic Assistant
- Optometric Technician
- Optometric Technologist
- Physical Therapist

- Radiologic Technologist
- Sanitarian
- Sanitarian Technician
- X-Ray Technician

Consequently, the research team was able to interview only a select group of minority students, i.e., those who had applied, were accepted and were in various stages of completion of these programs. The team attempted to be sensitive to potential additional barriers for those who did not apply, matriculate or had to drop out.

Thirdly, the diverse group of allied health fields surveyed included programs ranging from 6 months to 4 years plus an internship, programs requiring heavy academic and clinical loads versus just clinical work, and programs costing as little as $80/year and as much as $6000/year. Consequently, though the barriers and recommended solutions are presented without reference to a specific allied health program, some are more applicable to some programs than others.

The results of the objective and quantitative analysis of the focus groups point to several specific programs of action that would yield a high cost benefit in terms of increasing minority participation in post-secondary allied health fields.

First, comprehensive educational programs should be developed to expose junior high students to the allied health fields. These programs should include answers to questions such as:

- What is allied health?
- What kinds of allied health fields are there?
- What kinds of courses would I have to take in high school to be admitted to an allied health program?
- Are my high school grades important?
- Where do allied health professionals work?
- How much money do allied health professionals make?
- Can I get a scholarship?
- What schools have allied health training programs? How do I select which is best for me?
- Can I go on and be a doctor after I get my degree in allied health? How long would it take?
- Can I get a secure job in allied health?

These are just some of the issues that should be addressed in familiarizing students with allied health and "turning them on" to a career in an allied health field. This program should be designed and developed to be used at a time in a student's educational life such that:

- The individual is not already tracked.
- The individual has not already "opted out" of science courses necessary to prepare for or be accepted in an allied health program.
- The individual still has time to develop the necessary academic record to be accepted and survive in a post-secondary allied health program.
- All individuals, regardless of academic achievement to date, will have the benefit of the program.

This program concept is supported in a recent article by Eyde (1970) who indicates that the planning of a career is a developmental process beginning in early adolescence and continuing through the high school years. Eyde states that by taking such developmental changes into consideration,teachers and counselors might better be able to focus their attention on young people at the times when they are most receptive to new career information.

Ideally, a parallel type of educational program could also be available outside the formal educational system to expose parents, families and youngsters to the positive aspects of an allied health career.

Though the major barrier to minority participation in the allied health field, to date, has been lack of awareness of the field, what happens to minority students once they get into a program? Both the objective and quantitative focus group data indicated that after minority students entered a program there was not an adequate support system. Students felt isolated, did not feel they received all the academic and counseling support they required and felt somewhat intimidated by the day-to-day hurdles.

The Automated Concept Analysis (ACA) indicated a significant discrepancy between the time perspective of the faculty and the students. The students are most concerned with their problems in completing the allied health program while the faculty is concerned with their employability once they have graduated.

This dissonance in perspective is probably partly responsible for the students' feelings of lack of support or concern for their daily endeavors.

Furthermore, to the faculty, the students' problems were essentially statistical and goal oriented, i.e., they perceived the problems in terms of numbers of students who can be enrolled and graduated. This orientation, regardless of its merit and reason, generates an impersonal view of the student. It also leads to the development of an impersonal set of problem solving mechanisms by the faculty, such as modify the entry requirements, provide more financial aid or increase the percentage of minority students. Although not stated as such, the implication of this outlook is that there is ample room for failure. If the current group of students fail, there is always the next incoming class. The faculty assumes that the impersonal means of dealing with the problem can become sufficiently refined in time to increase the statistical probability of success.

The students' problems of perceived lack of adequate support within the programs and/or academic institutions could be overcome in several ways:

- Sensitize the faculty, staff and counselors to the perceived needs of the students. The faculty should be reoriented to the now, practical problems perceived by the students.
- Establish a mechanism for regular communication on perceived problems between faculty and students. This mechanism should include a third party moderator or ombudsman to facilitate the understanding of all points of view.
- Establish for every student, not just minority students, a readily available reference location or resource center on ancillary services such as financial aid available to students.
- Establish for entering minority students a support structure with a counselor, staff member and fellow student (hopefully, some of whom are minority). This support structure should help students adjust academically, socially and psychologically, be capable of recognizing problems before they reach crises proportions and provide necessary ancillary resources.

Minority students reported fewer isolation and lack of support problems in one New England school in which such a support structure existed.

The problems of completion perceived by the faculty could be partially overcome in several ways:

- Determine realistic entrance requirements for each of the post-secondary allied health programs. The entrance requirements should be relevant to the programmatic course work and goals and should provide a high degree of predictability for successful completion of the program.
- Develop a mechanism for translating the entrance requirements into secondary school educational program content.

In summary, these recommendations are interrelated in that if a program of public information is successful in interesting more minority students in the allied health fields and the secondary system is successful in better preparing these individuals then there will be more minority students prepared to matriculate. This should serve to reduce the feelings of social isolation, lack of support, and lack of preparedness now expressed by minority group individuals in predominantly white schools. This hypothesis is partially substantiated by the data from a focus group in New York City which included several individuals from a minority (Black and Spanish surname) institution. These individuals reported no barriers reflecting social isolation, alienation, or discrimination. The major barrier cited by this group was lack of academic preparation.

REFERENCES

Bernstein, Basil. Elaborated and Restricted Codes: Their Social Origin and Some Consequences. In J. J. Gumperz and D. Hynes (eds.) The Ethnography of Communication. American Anthropogist, Special Publication Vol. 66, pp. 55-69, 1964.

Crossland, F. E. Minority Access to College.

Eyde, L. D. Eliminating Barriers to Career Development of Women. Personnel and Guidance Journal, Vol. 49, September, 1970, pp. 24-28.

Goldman, A. E. The Group Depth Interview. Journal of Marketing, July, 1962, pp. 61-68.

Laffal, J. Pathological and Normal Language. New York: Attention Press, 1965.

Laffal, J. A Concept Dictionary of English. New York: John Wiley and Sons, 1973.

REPORT OF EXISTING BARRIERS & STATISTICAL PROFILE OF MINORITY STUDENTS ENROLLED IN TWO AND FOUR YEAR COLLEGES

There are many barriers to minority students' admission, successful participation and graduation from allied health programs. These barriers represent a complex series of factors which involve the prevailing educational, cultural and social systems in a particular geographic area and in the nation as a whole. Five categories of barriers, broad in scope, have been identified. These, along with many sub-barriers, will be discussed in the following pages. One must understand the barriers and how they relate to each other in forming a most formidable obstacle. Therefore, if there is to be a significant reduction in or elimination of these barriers, each barrier and sub-barrier must be identified and adequately and responsibly dealt with.

I. Educational Deprivation - Those students with an inadequate or inappropriate secondary school education have had their foundation laid for such problems as inability to read, understand or communicate well in their own language; the inability to think quantitatively; a poor foundation in the sciences; and poor and/or biased career counseling.

   A. Poor Academic Preparation - Poor academic preparation produces "educationally inexperienced" students who have not mastered a series of synapses or steps in the learning process. This can be translated into a variety of barriers to learning:

      1. Weak or nonexistent background in fundamental skills (math, English, reading, science);

      2. Inability to directly transfer past knowledge to new situations;

      3. Weak test taking skills;

      4. Weak language development and verbalization skills;

5. Narrow frame of reference;

6. Lack of intellectual stimulation;

7. Underdeveloped reasoning skills.

The ramifications of poor academic preparation can best be illustrated by the results of a study of 1969 graduates, who entered two or four year colleges, from the public school system of a rather large northern, urban community. The minority population of this community is between 16 and 22 percent. Of the 55,606 graduates from the state, 52 percent went to two and four year colleges, as opposed to 30 percent of the 4,341 graduates from the largest urban community in this state. A closer look at the 16 public high schools in this community reveals that 7 of these schools have better than 60 percent minority enrollment with at least 3 over 90 percent black. [1]

B. Academic Achievement-Aptitude Tests - In exploring the question of tests, it has been found that few tests are useful in screening the minority candidate; not even the nonverbal or matrice tests or so-called "culture free" tests. Basically tests show how well in comparison with peers the testee has absorbed his culture and education. Testing individuals who have not had the advantage of an adequate or appropriate education merely proves that they lack basic skills and in no way tests their aptitude or academic potential. Yet one author concludes after reviewing the literature that "admissions to selective colleges should be based substantially on test scores and high school grades whether or not the applicant is from a minority racial, ethnic or socioeconomic group." [2] Another study examined the relationship between past achievement (high school quarter), the American College Test (ACT), and first semester college GPA. A two way analysis of variances indicated that high school quarter rankings were better indicators of potential college achievement than the ACT. It also demonstrated that the ACT has a built in sex and ethnic bias favoring male and Anglo-American subjects. [3] This analysis may not follow, however, if it is applied to a student who ranks in the top quarter of his class but whose high school is ranked 16th out of 16 by colleges with regard to the calibre of the curriculum offered to students in the college preparatory courses.

Review of ethnic variables in the educational process bear out the fact that membership in a particular racial-ethnic group has no effect on academic achievement when research controls for socioeconomic factors. In a national survey, 24 percent of the differences in academic achievement was associated with membership in racial-ethnic groups of Indian, Mexican, Puerto Rican, Negro, Oriental or White. After social conditioned variables were accounted for, the 24 percent dropped to 1.2 percent. [4]

C. Career/Academic Counseling - Poor and/or biased counseling frequently accounts for students' lack of awareness of educational opportunities and career mobility in the allied health field. In a focus group meeting held with five Black second year dental hygiene students on November 19, 1973, in Boston, several interesting factors were brought to light. Prior to entering the program, all of the students had been out of high school from 3 to 10 years. Two had worked as dental assistants for private dentists. Only one dentist recommended or encouraged the student to proceed for additional education. One student was a corpsman in the Navy with two years of college. Another had planned initially to enter a nursing program. They all said they "fell into" the dental hygiene field. None was counseled in high school about the allied health field. Most had been discouraged from seeking higher education. Some of these findings correlate with the study of Negro students attending a high school in a low socio-economic area of Detroit. This study investigated the students' occupational preferences and occupational expectations. One of the major findings was "the students perceive the school as being a minor source of occupational information, and parents and relatives as being more influential in their choice of an occupation than teachers and counselors." [5]

Vontress feels it is the duty of the counselor to inform college admissions offices of the strength of black students despite modest test scores. He also cites certain factors as inhibiting effectiveness of a counselor when working with Black students: Ignorance of a student's social-psychological background, language barrier which applies to minorities in their mode of expression, and minority students unfamiliarity with the concept of professional counseling. [6]

An analysis of these barriers clearly indicates that the "educationally inexperienced" students and minority students have been consistently pushed farther away from the mainstream of American society. Adaptive skills that enable one to function in a higher educational setting are usually acquired early in life, in the environment of family, peers, and school. But the family and school situations have not always functioned, for the minority and/or "educationally inexperienced" person, as they have for the majority educationally experienced person. In other words, these students have not been provided with the adaptive and functional skills necessary to make it possible for them to enter post secondary educational programs.

II. Cross-Cultural-Interpersonal-Communications - The more overlap in life experiences the easier it is for two individuals to communicate on an interpersonal basis. Communication becomes increasingly more difficult when persons from two different ethnic groups are involved or when the frame of references used are worlds apart. A break down in communications produces barriers such as alienation and isolation. Language itself can be a barrier. The language in which any message is delivered is as important as the message itself. A person speaking in a foreign ~~language,~~ "ghetto" ~~language and/or dialectical patois~~ communicates to the receiver something else besides the spoken word.

A. Language [7]

1. Foreign - The foreign born student or anyone who uses English as a second language, regardless of the number of years they may have lived or been educated in this country, will have great difficulty in expressing themselves in verbal and written English. This is further complicated by their unfamiliarity in expressing themselves in our idiomatic usage of the language. These students must often translate from English into their own language, interpret the data received, retranslate into English and only then record the information. This process takes so long that note taking and test taking become interminable, tedious chores in which the lack of adequate language skills spells the difference between success and failure.

2. Dialectical Variations or use of language not representative of School Environment ("Ghetto Language"; "Different Language") - Such factors as pronunciation, variations in vocabulary, idiomatic expression, etc., may severely penalize the student in his attempt to acquire the concepts embodied in the curriculum. This student will be understood by his peers and be understood by his parents but not necessarily by his teachers. Use of ghetto language is often equated with saying that an individual cannot communicate, particularly the individual who has been labeled disadvantaged, and who, for the most part, resides in ghettos, barrios, slums, depressed areas, migrant camps and reservations. A further misconception is whatever the language being used it is unintelligible and cannot be understood. Certainly many people labeled as disadvantaged do not talk the way the majority of Americans do. However, "disadvantaged or different" individuals can communicate. "What is often misunderstood is that verbal expressions are a somewhat sophisticated means of excluding outsiders, and that in practical knowledge they are far from inferior." Their language differs and is therefore unacceptable to the average American because the "disadvantaged" form a separate

community within American Society, separated and isolated from "normal society" geographically by location, and psychologically by attitudes and behavioral patterns; if they are Blacks or Spanish Surnames, by their color. 8

B. Cultural Differences-Alienation and Isolation - Cultural differences do exist. Most recognize those who look different, talk different, dress different and eat different from them. The degree to which the various cultural differences in American Society are understood and accepted, as opposed to merely being tolerated, is indeed very limited. Much has been written on these very familiar cultural differences. However, not much has been written or understood about the culture of poverty. Many of the "disadvantaged", "educationally inexperienced" students and minority students are products of a culture of poverty. The lack of understanding of this phenomenon can often lead to alienation and isolation of the student. These students will encounter additional difficulties which will cause their adjustment to school to take longer and thereby hinder their academic success. Specifically, their adjustment to the white, middle class school may involve fear of not being accepted; embarrassment over lack of appropriate clothing or sufficient money; awareness of lack of formal education within their families; the insecurity of not knowing what is expected of them or what to expect from others; differences in perception; the double standard that forces them to prove themselves because they are different from the dominant group; the often hostile, condescending or patronizing attitudes encountered by the non-white in an all white environment. 9

"The culture of poverty is not just a matter of deprivation of organization, a term signifying the absence of something. It is a culture in the traditional sense in that it provides human beings with a design for living with a ready-made set of solutions for human problems and so serves a significant adaptive function. This style of life transcends national boundaries and regional and rural-urban differences within nations. Wherever it occurs its practitioners exhibit remarkable similarities in the structure of their families, in interpersonal relations and in their orientation in time." 10 It is no wonder then that middle class assumptions about common sense and social responsibility have no meaning to students from this culture. This serves only to further isolate and alienate them from the dominant school culture. No one has taught them to make provisions for or allowed time for them to make the necessary and timely adaptations to ensure survival in a highly complex and competitive social order. Or even more significant, no provisions have been made to accept them and their differences and to profit from their differences because these differences do not mesh with the expectations of the system as it is currently designed and defined.

C. Attitude-Self Perception-Motivation - Attitudes are personal and the basis of prejudice. The individual builds his attitudes as he lives and learns in his environment. Attitudes become habit patterns. Attitudes resulting from different life styles will influence an individual's view about education, academic achievement, motivation, self concept and willingness to seek and accept help.

Behavioral and social sciences have legitimatized and perpetuated numerous societal myths concerning minorities. The prevailing belief of many social scientists and public school teachers that Blacks are not educable by virtue of their genes has served as a self-fulfilling prophecy for many Blacks. The increasing publicity given to the problem of massive and cumulative retardation of Black children compared with Whites make many Black students afraid to compete. A Navajo student's apparent lack of motivation or interest in high academic achievement may be misinterpreted by educators who are not familiar with the Navajo's attitude toward competition. "The Navajo culture does not encourage individual achievement at the expense of their fellow man." [11]

In a study completed by Kaplan, there was "a significant positive relationship between self concept and academic achievement. That is, those children having more positive self concepts had higher academic achievement." [12] Thus an apparent drop in motivation of a previously motivated "culturally deprived", "educationally inexperienced" student may be attributed to many factors. These factors may be internal or external; however, many external factors increase or decrease a student's perception of himself and thus his motivation. Some of these external factors are:

1. The role of color valuations and interracial attitudes and relations;
2. The dilemma of adjustment for personality stability to a cultural environment that is backward and obstructive to general racial development;
3. The effect on Black youth of the social implications of enforced racial segregation both with respect to external groups compelling and to the restricted cultural world in which they live;
4. The protective covering and "avoidance" patterns developed by Black youth in response to their racial situation;
5. Race attitudes toward themselves as Blacks and toward other Blacks. [13]

The communications barrier is not insurmountable if the person attempting to communicate appreciates the realities of the situation and the capabilities of the people with whom he is dealing.

III. Socio-economic - Several issues are of importance in this category: family structure, financial status, socialization and environment.

A. Family Structure - Family structure varies in different life styles. Indians have an extended family structure, which may place several demands on a member (even though he may be in school), that is not accepted nor understood by those outside of this culture. Some groups have no stable family structure.

B. Financial Status - Financial status varies significantly. With limited financial resources, meeting immediate needs are of utmost importance. If there has never been a savings account or extra money, one never learns to budget. Demands may be placed on a student's financial resources by family, friends and by the educational institution. Because of this most minority students have worked long hours while going to school. They think that working and going to school is a way of life not to be separated. Most are working not just for extra pocket money but to put additional and necessary money into the household budget. The demands post secondary education places on students, especially those with poor academic preparation, will not allow the student to continue to do both. If he does, the results will be reflected in his academic standing. Yet for many not working means not being able to attend school.

C. Socialization - The socialization process, learning how to manipulate and survive the system, is often overwhelming, and many times defeats the ablest student. In addition to maintaining a full academic courseload, learning how to study, take notes and tests, minority students must also adjust to White students, White professors and White social customs and norms. Many fears can be generated during this acculturation process. The fear of initial failure, and the fear that continued failure engenders, fear of being overpowered by teachers who are ignorant of the culture and mores of his society, fear of being misinterpreted, fear of lack of understanding from teachers whose backgrounds are totally dissimilar to his, and fear that his efforts to achieve and accommodate himself, to demands which are basically alien to him, will go unrecognized.

D. Environment - The environment of which we are a product can color a minority student's perceptions of the world he is entering. Since he has not been a member of the mainstream society, his action, interaction and reaction to what he sees may cause increasing problems for him and for others.

IV. Recruitment/Admissions-Financial Aid

A. Recruitment/Admissions - Subsequent to the death of Martin Luther King there was a surge by traditionally white institutions to increase their minority representation. Giving further impetus to this effort was pressure, from the Office of Civil Rights, DHEW, on the institutions to comply with the 1964 Civil Rights Act. In spite of this apparently well-intentioned and committed effort, the traditionally white institutions are still only educating 3 percent of the Black population pursuing higher education. The majority of the allied health programs are conducted in the traditionally white institutions. If, as reflected in the 1969 national survey, the entering freshmen rate continues at the 3 percent level, there will never be a substantial increase in minority representation in the allied health programs unless the traditionally black institutions are given substantial assistance in establishing allied health programs in their schools.

While many institutions have established "special programs" for the so called "high risk", "disadvantaged", "culturally deprived" Black students, the admissions procedures used for these programs and for regular Black admissions remain very traditional. [14] Standardized tests and high school grades are widely used while extracurricular activities, recommendations, interest, motivation, initiative and seriousness of purpose, which may be more accurate predictors of academic potential, are used relatively infrequently.

One requisite for admissions is the applicants' willingness to accept whole hog the minority program and cultural activities established on campus. Entering Black freshmen are expected to plug into academic programs for disadvantaged minority students. "Colleges have created these special programs for minority students largely because they really believe that all Blacks, Indians, Puerto Ricans and Chicanos are disadvantaged and therefore need tutoring." [15] This is certainly in line with the thinking of many social scientists who believe that minority students, by virtue of their genes and/or environment, are intellectually inferior to Whites. "In 1970, 62 percent of all Blacks enrolled in public colleges in New York State were put into so called 'Opportunity Programs'" [16]

For this reason, many academically prepared, well qualified, middle class Black students are overlooked in the recruitment process; instead, recruited are Black youth who are not academically-minded but represent the cultural backwardness of the nation's ghetto. Today's "Token Black" is "blacker" (which means more militant, less educated and poorer) than yesterday's "Token Negro". [17]

Not all recruitment efforts have been so blatantly racist. Sincere efforts have been made by many institutions who are deeply committed to bringing about a change in the nature of American Society. Many programs have recognized the fundamental problems facing many minority students and have begun to implement programs to rectify these. Some identify potential minority students early in their secondary school education and provide them with role models to emulate and tutors to assist them in bringing up their academic grades along with improving their understanding of the course content. Much effort has also been placed on convincing minority students that they do have a chance to get admitted to a career that heretofore has been beyond their reach.

B. Financial Aid - Recruitment in the present economic climate also poses barriers. The cost of allied health education has been an obstacle to many students who might have chosen this field. The legislation in the health field that provided for loans and scholarships has been drastically cut and the competition for these fewer dollars has increased.

An article in the Wall Street Journal discusses the proposed budgetary cutbacks. "HEW will reduce its support for training nurses, veterinarians, optometrists, podiatrists, pharmacists, and public health personnel. Support will be concentrated on training doctors and dentists because the need for other types of health professionals isn't as great." The Supplemental Opportunity Grant Program which furnished $210 million to 303,000 students during fiscal year 1973 also received the axe. It was replaced by the Basic Opportunity Grant Program which has many restrictions and limitations concerning eligibility.[18] The 1974 Budget calls for the elimination of institutional and student aid in allied and public health fields.[19]

Actually, very few Black and minority people have profited from the federal program set up to spread the benefits of higher education to all segments of American Society. Even if they were able to overcome the first hurdle, that of making out the Parents' Confidential Statement (PCS), many other obstacles still remain. Many parents refuse to fill out the PCS because they feel it is only another way that the "White Society" is trying to get at them. Many minority families exist on incomes well below the poverty criteria. Therefore the present complicated PCS form is an unnecessary burden to them.

In Pittsburgh, in 1969, 471 Black undergraduates were attending Pittsburgh's 6 four year colleges and universities. They made up barely 2 percent of the total enrollment of 22,578. The Black population of Pittsburgh is approximately 20 percent. However, the maximum number of Blacks benefiting from the financial aid system at that time was a mere 2 percent of the college population.[20] Universities and colleges in other cities reflect similar kinds of statistics. A report compiled by the Office of Education shows the number of students participating in the College Work-Study Program, Economic Opportunity Grant Program, National Defense Student Loan Program and/or some combination of one or more of the above. The report very clearly indicates who is getting the lion's share of these funds. Looking at the publicly supported institutions on a national level, a total of 459,091 students participated in the ~~program; 99,427 or 23 percent represented minority students~~ (Black, Spanish Surname, American Indian, Oriental) benefiting from the program. Blacks represent 15 percent of that figure. [21] Minority students are not getting a fair share of the financial aid available. The extent of barriers facing minority students becomes increasingly clear when all of these factors are combined.

The ability of many students to cope with the university or college environment is highly dependent upon their financial aid situations. Students not having pocket money or a wardrobe that an active college life dictates will have a sense of insecurity. "Insecurity breeds discontent and interferes with motivation. Without motivation, the chances of realizing goals are seriously stifled." [22]

V. Institutions and Faculty - Ronald Goldman, as a postscript to a collection of essays written by persons of disadvantaged backgrounds who had succeeded, stated "...but one is impelled to ask the question whether in fact we have as yet achieved free, universal educational opportunities for all in such a way that those who have come from stunted backgrounds are given the fullest opportunity to succeed? These essays I trust will show quite convincingly, although not in a statistical manner, that equality of educational opportunity can never be realized until the worst elements of social inequality are removed." [23]

A. Institutions - The successful completion of a program depends for the most part upon institutional commitment. This means that recruitment, admission and retention of minority students must be approached from the perspective of a total organization geared to give full support to the student from the moment of initial contact through graduation. It is crucial for the assistance given a minority student not to end when he is admitted to an allied health program but be sustained throughout his educational experience to meet his academic and emotional needs. [24]

B. Faculty - After a student has been admitted, the responsibility for his retention falls on the faculty. Its cooperation may mean the difference between his success or failure. While academic support is essential, emotional and psychological support must also be provided.

Barriers are encountered here when the faculty is unable, unwilling or does not know how to become involved in making an effort to reduce the above barriers. In fact, many faculty unwittingly contribute additional barriers for the students to overcome. The faculty may not even be aware that these are causing problems to students because they lack knowledge and understanding of the following:

1. The characteristics, values, beliefs and concerns of minority group communities, be they ghettos, barrios, reservations or migrant camps;
2. The nature of educational needs that accompany poverty;
3. The extent to which differences, cultural, social, economic and racial, between the educator and the student, affect the educational process;
4. Their attitude and level of expectation which is communicated by their every word, deed, facial expression and posture.

Coles and Piers address themselves to the needs of the younger child but most of these same principles apply to the college age and adult population with whom we are presently concerned. The authors state:

> "If we really want to help, decisively and effectively help a poor child, a ghetto youth, we somehow have to give what was never had, or supply what was lost. We have to talk to the child, work with the child, be with the child in such a way that he or she learns what children ought to learn in a decent world: trust, self-respect, self-confidence, a feeling of acceptance from others and from the world.
>
> In the context of Western Civilization today, attaining such a goal involves not only money and benevolence but the fostering of self help. To this end we must take a long, hard look at the mind, at its many and often devious ways, at the manner of its growth. We must look inward, but also outward at the way the individual and his social setting confront each other, at the conditions that make for competence and coexistence among people." [25]

For after all, "the admission of a student to a particular school is not the most crucial issue; a successful educational experience and graduation from that school is." [26]

Statistical Profile

At the meeting held in Washington in August, 1973 and in the first bimonthly report, mention was made that initial exploration of the secondary data available on minority student enrollment showed that the type of information required for this contract was not available, i.e., a breakdown of minority students enrolled in Allied Health Programs by year and by specific program.

Inquiry was made of a few representative institutions to substantiate this finding. They all reported that they had no data available in the breakdown of categories requested. The reason given was that they essentially compiled their information in accordance with the compliance report data required by the Office of Civil Rights which lists only total enrollment, total minority enrollment, further broken down by race-Negro, American Indian, Spanish Surname, and Oriental. A few institutions have mentioned that they intend to refine this information beginning in the fall of 1974, the next year that a compliance report is due.

The statistics in Figures 1 & 2 reflect the latest published information compiled from the Racial and Ethnic Enrollment Data from Institutions of Higher Education, Fall, 1970. The 1972 data is in the process of being published. No satisfactory or systematic method has been used by hospital based programs to collect their data. The Office of Civil Rights does not survey them on any regular basis. Therefore, the information from hospital based programs in the New England Region is not included in the report. A total of 343 institutions offer Allied Health Programs covered by this contract, 107 from two and four year institutions and 236 hospital based programs.

Figure 2 shows the total minority enrollment in the 107 two and four year institutions to be 13,906 students or less than 5 percent of the total enrollment. From this extremely low percentage and from the responses obtained from the few institutions queried, all indications are that there will be a very, very low minority enrollment in allied health programs.

FIGURE I. Statistical Summary of Minority Enrollment in Two and Four Year Institutions Offering Allied Health Programs Included in this Contract.

TWO YEAR INSTITUTIONS

State	# Schs.	Tot. Enroll.	Tot.Min. Enroll.	AI	N	SS	O
Connecticut	7	8,329	815	1	643	154	17
Maine	1	479	2	1	-	-	1
Massachusetts	7	11,623	328	6	169	105	48
New Hampshire	1	609	5	-	3	-	2
New York	19	54,834	2,993	98	1975	736	184
Rhode Island	1	3,581	94	5	79	3	7
Vermont	No two yr. insts. with allied health progs.						
TOTAL	36	79,455	4,237	111	2869	998	259

FOUR YEAR INSTITUTIONS

State	# Schs.	Tot. Enroll.	Tot.Min. Enroll.	AI	N	SS	O
Connecticut	5	13,401	465	4	335	110	16
Maine	3	8,433	72	8	25	13	26
Massachusetts	21	61,918	2,951	132	2031	271	517
New Hampshire	5	9,139	141	-	91	50	2
New York	34	109,721	5,865	465	3758	1135	507
Rhode Island	2	8,552	199	37	73	67	22
Vermont	1	5,861	30	-	22	5	3
TOTAL	71	217,025	9,723	646	6335	1651	1093

KEY TO FIGURES. # schools - total number of institutions in each state offering allied health programs included in this contract.
total enrollment - total number of all students enrolled full time.
total minority enrollment - total number of minority students enrolled full time.
AI - American Indians.
N - Negro.
SS - Spanish surname.
O - Oriental.

FIGURE II

Summary of Minority Enrollment In All Institutions Offering Allied Health Programs Included in this Contract

State	# Schs.	Tot. Enroll.	Tot. Min. Enroll.	AI	N	SS	O
Connecticut	12	21,730	1,280	5	978	264	33
Maine	4	8,912	74	9	25	13	27
Massachusetts	28	73,541	3,279	138	2,200	376	565
New Hampshire	6	9,748	146	---	94	50	4
New York	53	164,555	8,858	563	5,733	1,871	691
Rhode Island	3	12,133	293	42	152	70	29
Vermont	1	5,861	30	---	22	5	3
TOTAL	107	296,480	13,960	757	9,204	2,649	1,352

REFERENCES

1. McCain, Nina "Schools Lacking a College Try?" Globe Staff, Boston, Mass. November 10, 1970.

2. Stanley, J. C. "Predicting College Success of Educationally Disadvantaged Students". *Center for Social Organization of Schools Report*, Johns Hopkins University, No. 79.

3. Borup, J. H. "The Validity of American College Test for Discerning Potential Academic Achievement Levels: Ethnic and Sex Groups." *Journal of Educational Research* 65:3-6, 1971.

4. Pedersen, Paul E. "International and Intercultural Dimensions of Counseling." Lecture #5, Unpublished lecture notes, University of Minnesota, February, 1972.

5. Sain, L.F. "Occupational Preferences and Expectations of Negro Students Attending a High School Located in a Lower Socio-Economic Area." *Dissertation Abstracts* 27(4-A):966, 1966.

6. Vontress, C. E. "Counseling Negro Students for College." *Journal of Negro Education* 37:37, 1968.

7. Baugh, E. Lorraine, *Open the Doors to Nursing Education*. Boston: NEO, Inc., 1971.

8. Carbine, Michael E. "Communicating with the Disadvantaged." *Manpower* vol. 1, October, 1969.

9. Baugh, E. Lorraine, *Op. Cit*.

10. Daniel, Jack "The Poor: Aliens in an Affluent Society: Cross Cultural Communications." *Todays Speech* 18(1):13-21, 1971.

11. Peterson, K. D. "Some Steps for a Beginning Teacher of Navajo Students." *Journal of American Indian Education* pp. 221-6, 1971.

12. Caplin, M.D. "The Relationship Between Self-Concept and Academic Achievement." *The Journal of Experimental Education* 37:13-16, 1969.

13. Pederson, Paul E., *Op. Cit*.

14. Sedlacek, W. E. and G. C. Brooks, Jr. *College Admissions and the Black Student: Results of a National Survey*, Maryland University, College Park, Cultural Study Center, 1970.

15. Meyers, Michael, "The New Black Apartheid." *Change* vol. 4, no. 8, October, 1972.

16. *Ibid*.

17. Ibid.

18. "Proposed Federal Budgetary Cutbacks." Wall Street Journal, January 30, 1973.

19. "Training, Scholarships and Cuts in Health Budget." Health Manpower Report, February 6, 1973.

20. McClellan, Frank, "A Black Student Looks at the Present System of Financial Aid." College Board Review no. 77, Fall, 1970.

21. "Federal Student Financial Aid Programs, Summary Report on Interaction of Federal Programs by Race, Ethnic Group - Fiscal Year, 1969." Office of Education, DHEW, 1969.

22. McClellan, Frank, Op. Cit.

23. Goldman, Ronald, ed. Breakthrough. London: Rautelege, Kagen Paul, 1968, p. 401.

24. Baugh, E. Lorraine, Op. Cit.

25. Coles, Robert and Maria Piers, Wages of Neglect. Chicago: Quadrangle Books, 1969, pp. 7-8.

26. Baugh, E. Lorraine, Op. Cit.

DESCRIPTION OF THE BIBLIOGRAPHY

Purpose:

This Bibliography provides information on 132 articles, books and publications from a variety of sources which pertain to barriers encountered by minority students, programs which were developed to effect changes in these barriers and other references of a research and behavioral nature which are pertinent to the study.

Scope:

Abstracts have been provided for all references obtained from the data bases of ERIC, PASAR, and NCMHI. Annotations have been written on the citations received from MEDLARS and on the articles, books, bibliographic references and unpublished materials retrieved from the manual search.

ERIC - Educational Resources Information Center - Annotated bibliographies were obtained from the data basis of the CIJE (Current Index to Journals in Education) and RIE (Research in Education). The search covered the period of January, 1963 to December, 1972.

PASAR - Psychological Abstracts Search and Retrieval - This system searched the abstracts of the American Psychological Association from 1967 to 1973.

NCMHI - National Clearing House for Mental Health Information - Provided a limited number of abstracted references from their literature retrieval system.

MEDLARS - Medical Literature Analysis and Retrieval Systems - Citations were obtained from the data bases of Index Medicus, Index to Dental Literature and the International Nursing Index covering the period of January, 1964 to August, 1973.

MANUAL LITERATURE SEARCH - This search included books, articles and unpublished material written within the last five years.

Items deposited in ERIC are identified by ED numbers.

Organization:

None of the items retrieved dealt exclusively with the identification of barriers or proposed solutions. However, programs have been instituted many of which appear to have had some degree of success in reducing the barriers experienced by those participating in their particular program. Few items, if any, were found which were pertinent only to the Northeastern region. Therefore, the Bibliography has been divided into two broad categories, one containing conceptual or non research oriented articles and the other research reports. This classification serves essentially two purposes: (1) It emphasizes the quantity and quality of conceptual or non research oriented studies and (2) it points to the need for additional empirical research in the area.

PART I

CONCEPTUAL OR NON-RESEARCH ORIENTED ARTICLES

Alker, H.A. and M.B. Closson (1971) "Admission Standards, Institutional Racism and Black Student Political Participation". Proceedings of the Annual Convention of the American Psychological Association 6(Pt. 1) :397-398.

This study falsifies for 1 historically salient case the hypothesis that lower admissions standards account for increased Negro student protest. Our data suggest, on the contrary, that low scores on admissions predictors are irrelevant. Rather it is students high on a traditional admissions standard, Scholastic Aptitude Test-Verbal, who, if they subsequently receive low grades in college, are politically active. Some evidence concerning the causal direction of this relation involves poor academic performance in talented Negro students prior to their political participation. (PASAR)

Ayers, G. E. (1970) "The Disadvantaged. An Analysis of Factors Affecting the Counseling Relationship". Rehabilitation Literature 31:194-9.

This analysis of factors influencing the counseling relationship with the disadvantaged is limited. The author discusses counselors' attitudes, counselors' knowledge of clients' background, communication in the counseling relationship and client attitude. The framework for the author's presentation is the theoretical postulates of Truax, Carkhuff and Rogers. In discussing each of the above categories the author states that attitudes are the least mentioned but the most critical barrier affecting the successful adjustment of the disadvantaged. Counselors often do not understand the disadvantaged, their culture, style of life, values and attitudes, and virtually have no accurate knowledge and experience in dealing with them. He suggests that a logical method for rectifying this problem would be to educate counselors in a variety of training approaches. Attempts at communication can be successful or unsuccessful depending upon the credibility of the source. Inability to penetrate the language barriers of the disadvantaged renders middle class counselors helpless. Another salient factor mentioned concerned the disadvantaged client's basic lack of familiarity with counseling which manifests a behavior displaying a high degree of skepticism. In conclusion the author reiterates the need to encourage the creative utilization of inservice and preservice training, sensitivity training, visits to disadvantaged areas and modification of curriculums to include information on the disadvantaged.

Bass, W. P. (1969) The American Indian High School Graduate in the Southwest. Southwestern Cooperative Educational Lab., Albuquerque, New Mexico. 106p.

This study presents the post high school achievements of a representative group of Indian high school graduates in the southwest in terms of post high school training and employment. Their achievements are indices of the degree to which they have acquired essential skills for employment, social adjustment, and self-fulfillment. A questionnaire and interview guide were used to assess whether or not the graduates (384 interviewed) had entered and completed continuing education programs, and to examine other characteristics of the sample. Three out of four graduates continued academic or vocational programs after high school and, out of those, 2/3 completed their programs. Only 7% of the graduates finished college, while 44% completed vocational-technical programs. At the time of the interview, more than six years from the time of high school graudation, 2/3 of the females and 3/4 of the males investigated were gainfully employed in occupations ranging from clerical and service occupations to craftsman and professional positions. Of those who left continuing education programs, inadequate finances, military service, marriage and pregnancy were cited as the most common reasons. Graduates also answered questions on factors and forces influencing them in high school that encouraged or discouraged continuing education. Overall, it was noted that language problems, rigid curriculums, and cultural differences prevent the Indian from making an even more effective adjustment to modern society. The questionnaire and interview guide used are included in the appendices. A related document is ED 026 195. (RT) (ED 031362)

Bayton, J. A. and T. W. Muldrow (1968) "Interacting Variables in the Perception of Racial Personality Traits". Journal of Experimental Research in Personality 3:39-44.

480 Negro college students took the Guilford-Zimmerman Temperament Survey in terms of how they thought "very light-skinned Negro males and females" and "very dark-skinned Negro males and females" would reply to the items. The sex and self-judgements of the Ss' own skin color were used in the analysis. Attributes of the Ss interacted with cues concerning "the observed" in determining the personality assessments. Differentiation of O attributes seemed especially related to determination of the traits of "the observed." Light-skinned Negro males seem to have some difficulties in their self-concept vis-a-vis dark-skinned Negroes. (PASAR)

Bellin, L. E. et al. (1967) "Preparing Public Health Subprofessionals Recruited from the Poverty Group--Lessons from an OEO Work-Study Program". American Journal of Public Health 57:242-52.

In 1965 a work-study project, funded by OEO, was instituted by the Springfield Health Department and Holyoke Community College. Twenty students from poverty groups (13 Caucasians, 6 Negroes and 1 Puerto Rican) were enrolled in a 27 month work-study program designed to prepare them to be public health subprofessionals. Course content and field experience are discussed in detail, and the need for special education and individual counseling for students from poverty groups is stressed. The work experience is viewed as facilitating adjustment to college. The project demonstrated both the feasibility of using trainees from the poverty class and the usefulness of public health subprofessionals.

Borgen, F. H. (1970) Able Black Americans in College: Entry and Freshman Experiences. Research Division, National Merit Scholarship Corporation, 990 Grove Street, Evanston, Illinois, 60201. 25p.

After their freshman year in college in 1966, 1744 outstanding black high school students who had reached the commended stage of competition in the first National Achievement Scholarship Program were followed up for study. They were classified according to the type of 4-year college attended: public or private predominantly Negro colleges, or low, moderate or high selectivity predominantly white schools. There were marked differences among the students attending the different types of colleges in socioeconomic status, performance on a standardized test of educational development, and regional and high school background. The public Negro colleges tended to enroll those who were most disadvantaged, both economically and educationally, while students at the highly selective white colleges tended to come from the most advantaged families and educational backgrounds. Overall freshman performance was quite high in all institutions, but students in the predominantly Negro colleges had higher grades than those in the predominantly white colleges. College type was also associated with the career choices and goals they expressed. (Author/AF) (ED 043285)

Borgen, F. H. (1971) "Differential Expectations? Predicting Grades for Black Students in Five Types of Colleges". National Merit Scholarship Corporation, Research Reports Vol. 7(2), 8p.

Compared to the precollege characteristics and college performance of 477 male and 837 female black students who had been nominated by their high schools for participation in the 1st annual National Achievement Scholarship Program.

Ss returned a questionnaire following their freshman year and were grouped according to their attendance at 5 types of colleges: predominately black public or private; perdominately white high, moderate, or low selectivity. Statistically significant correlations were found between scores of the National Merit Scholarship Qualifying Test (NMSQT) and freshman grades. Several of the relationships were modest, particularly for the highly selective colleges. An inverse relationship was found between GPAs and average NMSQT scores at the black and white colleges. It is concluded that the college performance of the average black student is a joint function of his level of educational development (e.g., NMSQT) and the type of college he attends. (PASAR)

Borgen, F. H. (1972) "Differential Expectations? Predicting Grades for Black Students in Five Types of Colleges". Measurement and Evaluation in Guidance 4:206-212.

Discusses the prediction of college grades for a national sample of black students attending a wide variety of colleges. When men and women were grouped in 5 types of colleges, statistically significant predictive relationships were found between scores on the National Merit Scholarship Qualifying Test (NMSQT) and freshman grades. Several of the relationships were modest, particularly for the highly selective colleges. For the typical black student considering college, these results imply that the level of performance he might expect to achieve is a joint function of his level of educational development (e.g., NMSQT) and the type of college he chooses to attend. The correlation between NMSQT and grades was 0 when the same students and colleges were studied as a combined group, demonstrating that predictive relationships can be hidden when diverse colleges are combined. (15 ref.) (PASAR)

Boyette, R. et al. (1972) "The Plight of the New Careerist: A Bright Horizon Overshadowed by a Dark Cloud". American Journal of Orthopsychiatry 42(4):596-602.

The purpose of the federally funded program, New Careers, is to motivate undereducated persons to aspire to a higher education. In the process, they are to obtain on the job training that will enable them to become paraprofessionals and, eventually, professionals. After the immediate enthusiasm about the program wore off, the trainees were able to see several things wrong with the program: 1) a lack of a career ladder; 2) no salary range; and 3) a lack of understanding of what was expected on the job. Guidance and advice in human relations helped the trainees learn how to intervene effectively in the system and how to deal with the attitudes of the professionals who seemed to militate against the trainees. It appeared that the staff members felt insecure in their positions and their racial prejudices. The aspirations of the trainees are to see the black community on its feet, economically and healthwise. The trainees (new professionals) feel they have an obligation to see to it that blacks no longer receive second class services. Their main objective is to educate professionals to the needs, aspirations and culture of minority groups. (NCMHI Abstract)

Brown, W. N. (1968) "Alienated Youth". Mental Hygiene 52(3):330-336.

A large number of people in contemporary society fail to find a place for themselves in the mainstream of living. Those between the ages of 16 and 21 in this situation have been categorized as alienated youth. Alienation has often been equated with delinquency, although many have associated it with poverty, lack of community integration, and lack of education. The alienated are the underachievers in education, the underemployed in industry, the school dropouts, the unemployed, and the adjudicated delinquents. It should be noted that the climate of values in public high school students is not focused on scholastic achievement, but most, due to internalization of a new, adult value system, and adequate economic and social resources, escape alienation and become part of the mainstream. Five societal pressures make for alienation in the youth of today: 1) the trend toward urbanization; 2) the egalitarian thrust; 3) the drive to "succeed"; 4) the concept of "fit"; and 5) the absence of "caring". The results of alienation, often hidden and complex, can be seen as the thwarting of productivity, the demeaning of the sense of self, and the rendering of an individual as an undue burden to his society. (16 references) (NCMHI Abstract)

Bucklin, R. W. and M. L. Bucklin (1970) The Psychological Characteristics of the College Persistor and Leaver: A Review. 19p.

This paper reviews the research done on the college persistor and dropout. Section I reviews studies that tried to determine how a student's personality affected his persistence in college or his leaving before graduation, his social life, his ability to adapt to the college environment, his classroom behavior, and his ability to seek and accept help. Section II considers the research concerned with the relationship of the motivation and interest of the college student to his college success, including the establishment of occupational and educational goals and the role of the family and cultural background. Section III discusses the investigations of the relationship of scholastic aptitude scores and dropout rate. Section IV reviews research on the role that study skills and attitudes play in college persistance. (AF) (ED 049709)

Burgdorf, K. (1969) "Outstanding Negro High School Students: A One Year Followup". National Merit Scholarship Corporation, Research Reports Vol. 5(4), 12p.

1 year after their expected date of graduation from high school, the 4288 participants in the 1st National Achievement Scholarship Program for outstanding Negro students filled out a questionnaire dealing with their college experiences. Data were analyzed to assess the extent to which the program accomplished its dual objectives of encouraging talented Negro students to attend college and of encouraging colleges to seek talented Negro students. Results indicate that Ss in the higher competition status groups were (a) more sought after by the colleges, (b) more successful in college entrance, and (c) had more nonacademic achievements. Most differences were small, not because Ss in the higher groups did poorly, but because Ss in the lower status groups did well. A followup of a random group of nonrespondents to the original followup indicates that sampling bias in the original followup acted to depress competition status group differences, but not substantially. (PASAR)

Callender, E.S. (1968) "The Ghetto Subculture". Personnel 45(4):8-14

Conditions that have devalued the black ghetto and the lives of its dwellers have been produced by white attitudes. Our whole culture is predicated on whiteness, and it has taught the Negro that he is inferior. He is powerless to overcome many of the physical and psychological frustrations he feels. To deal with this impotence or hide it from himself, he behaves in a hostile, aggressive, or apathetic manner. The current unrest in our black communities is aimed at giving a lift to the self-image and morale of its inhabitants. These ghetto dwellers must be brought back into the mainstream of American life, but rioting will not provide a quick solution. Lawlessness must be condemned by ghetto leaders and help given them so the course of moderation can be justified. Business must give this help and develop new job opportunities for the disadvantaged. One problem is that the black ghetto inhabitant has been so traumatized that even well-intentioned solutions may be threatening to him. Offering him a job may provide him with another chance to fail unless understanding and a program to help him succeed accompanies this. To deal with the hard-core unemployed, specially tailored programs are needed. This approach is utilized by the Street Academy which hires street workers to motivate high school dropouts to return to special classes so they may continue on to college. Business can also hire street workers who can offer the same kind of intensive storefront training and show the black man that he can also be successful in the business world. If our ghettos could become economically independent, psychological independence would follow. (NCMHI Abstract)

Carbine, M. E. (1969) "Communicating with the Disadvantaged". Manpower 1:2-6.

This study focuses on the communications barrier between the disadvantaged and the rest of the population and emphasizes the need to recognize that the disadvantaged can communicate; they simply communicate in a different way. The need to accept language differences and to treat the disadvantaged as equals is discussed in some detail. Particular emphasis is given to job placement problems. State personnel offices have had difficulties in reaching the disadvantaged; as a result some have experimented with outreach programs and have met with substantial success. The first two weeks after recruitment and the first two weeks on a job are seen as crucial periods requiring a great deal of understanding. Poor job performance is more often a result of communication difficulties and insecurity in an alien environment than a result of lack of intelligence.

Cohen, H. A. and F. P. Gesner (1972) "Dropouts and Failures: A Preventive Program". Nursing Outlook 20:723-25.

The hypothesis put forth in this paper suggests that what was perhaps more important than intellectual incapacity as a cause for high attrition rate was the students' emotional problems of grief, remembrance of past trauma, or poor basic preparation and study skills. This program was initiated in 1968 by the Cook Country School of Nursing in Chicago. At the time the School's attrition rate was between 45 and 50 percent, substantially higher than the national average. However, no more than 5 or 6 percent of the entering students were calculated risks. Upon analysis of exit interviews it was discovered that two factors played an important role in a student's withdrawal. Emotional problems stemming from home and family situations and inability to accept the demands of the nurse's work role were one and two. Other factors discovered were lack of basic skills in reading, writing, mathematics and poor study habits. A prevention program for the students was initiated which offered three components: 1) crisis intervention; 2) remedial skills tutoring; and 3) motivational or achievement group meetings. After the success of this initial phase, a program was introduced for the faculty which includes consultation, seminars on teaching techniques and leadership training. The author concludes by saying that the high attrition rate of nursing students is not necessarily due to intellectual incapacities. She feels that emotional problems due to grief, remembrance of past trauma activated by nursing clinic situations and poor basic preparation and study skills are possibly more important. Because faculty have an effect on students' performance, programs initiated to prevent attrition must take this additional factor into consideration if they are to succeed in reducing the dropout rate.

Cole, M. (1970) "Black Students and the Health Sciences". *Integrated Education* 8:50-8.

This article focuses on attempts by medical schools to increase black enrollment. Efforts thus far have concentrated on recruitment and post-baccalaureate programs; however, both have fundamental shortcomings. The greatest obstacle is seen as the secondary school since most potential students are lost at this level. The author argues that educational programs must start in high school if black enrollment in medical schools is ever to be significantly increased. The lack of genuine commitment on the part of medical schools is seen as another obstacle to increased enrollment. Unrealistic eligibility requirements, an alien social environment and inadequate financial assistance are examples. The author calls for a coalition between the black community and health professionals and offers suggestions for a national recruitment program.

Corry, R. D. and L. F. Cannavale (1972) "Expanded Functions Training for Dental Assistants in the Indian Health Service". *Journal of the American Dental Association* 85:1343-8.

This article focuses on the U.S. Public Health Service's Indian Health Service (IHS) Dental Program and its attempts to expand the functions of dental assistants. The needs of the Indian and Alaska native populations have been increasing since the mid-1950's and increases in manpower have not been able to keep pace with them. As a result the IHS decided that the functions of the existing staff should be expanded, and beginning in the 1960's several Dental Assistant Training Centers were established to train qualified Indian girls. The history of the schools is discussed briefly. Program content is considered in detail. All the programs have been quite successful, and the authors conclude that dental assistants can be taught expanded functions in a relatively short period of time.

Daniel, J. (1970) "The Poor: Aliens in An Affluent Society: Cross-Cultural Communication". *Today's Speech* 18:15-21.

This paper is concerned with some possible communication breakdowns resulting from the poor being aliens in an affluent society. The basic premise the author explores deals with the fields of accumulated experiences individuals have and how these experiences can interfere with or enhance communication. A particular problem is communication between professional and poor people. Material from several authorities is quoted presenting examples of how middle class assumptions of common sense and social responsibility make no sense to the poor. The author further states that the middle class oriented professional and the poor person are sufficiently different that they can be thought of as representing two diverging cultural backgrounds. That differences exist are the major concern of this paper. The author concludes by saying the more overlap in life experiences, the easier it is for two individuals to communicate on an interpersonal basis. The communication difficulties between professional and poor people increases even more when two ethnic groups are involved, i.e., Black-White, White-Puerto Rican, Chinese or Black. One step he recommends for overcoming these barriers will involve people seeking understanding of the divergent cultures in America.

Davis, W. G. and G. A. Welty (1970) The Old System and the New College Students. American College Personnel Association; Oberlin College, Ohio; Princeton University, N. J. 10p.

A combination of events have moved various colleges and universities to grant admissions to minority group students. With this change, problems have developed: mainly that of admissions criteria as related to academic achievement. The trend has become, therefore, toward either random selection or an open door policy. No matter what the process of selection may be, if black students differ socially and culturally from traditional students, they will continue to have difficulties once admitted to a traditional collegiate program. Therefore, if new criteria can be developed to select those who have the greatest chance to succeed in the hostile environment, chances for academic success would increase. Oberlin College has set about developing such criteria. They interviewed black applicants and in addition to regular admissions criteria, the students were rated on "hipness." This concept includes competitiveness, high motivation, and self reliance. A total of three groups were admitted: 18 were not "hip" but met regular criteria; 14 were both "hip" and met regular criteria; and seven were "hip" but did not meet regular criteria. At the end of the first semester, there was no appreciable difference in the distribution of grade point average between the three groups. (KJ) (ED 038707)

Dizard, J. E. (1970) "Black Identity, Social Class, and Black Power". Psychiatry, Washington, D. C. 33:195-207.

Examines the phenomenon of black identity or group consciousness and the current manifestations of it in the black community, particularly the politically relevant aspects of growing black community identity. 1160 black residents of Berkeley, California were interviewed in 1967 on a wide range of attitudes and experiences. High attachment to black identity was higher in younger and better educated blacks. Lowest attachment was seen in proprietorsmanagers, service workers, and craftsmen. These groups also were lower in militancy. An increase in black identity and group pride and "a growing sharpness in the conflict between black and white" are predicted. (24 ref.) (PASAR)

Egelston, E. M. (1972) "Licensure--Effects on Career Mobility". American Journal of Public Health 62:50-3.

Health manpower is a major factor in the provision of health care. Licensure of personnel is not the only factor affecting the main problems of health manpower but it has an influence on very many aspects (wages and working conditions, education requirements, administrative and organizational patterns and many others). This paper discusses how licensure should contribute to sound solutions and not constitute an obstacle. With approximately 200 health care occupations now identified in health care institutions, it is very difficult to keep up with the professional associations currently serving these occupations. The trend has been for professions to seek state licensure to determine who can practice and program accreditation to govern what will be taught. Many problems exist with the licensing process. Little planning has been done to establish crossover points between licensed occupations. Job mobility is lost in a sea of licensure qualification requirements and educational courses. As a result an individual cannot draw on his bank of knowledge and experience learned on the job or in educational programs. The author suggests the following actions which he feels would alleviate these impediments: call for a nationwide moratorium on any additional licensure of categories of health personnel; encourage the establishment of a national task force to recommend means of improving licensure practices; urge the adoption of intermediate measures to alleviate problems of health personnel licensure; expand state medical practice acts to allow physicians broader delegatory power in assigning tasks to allied health care personnel; and encourage the establishment of educational equivalency measures and job performance tests as alternative routes to licensure of health care personnel. He concludes by saying to the extent possible, licensure laws should contribute to sound solutions and not constitute obstacles to the delivery of health services.

Eiszler, C. F. and B. M. Morrison (1972) "Task-Specific Self-Evaluation as a Measure of Achievement Motivation". Journal of Experimental Education 40:25-32.

Investigated the validity of an internalized self-reinforcement paradigm as a model of achievement motivation, using 230 9th grade black pupils of an inner-city public school. It was hypothesized that, if achievement behavior was controlled and sustained by covert internal evaluations of performance, then Ss who more frequently reported positive self-evaluations during some specific school-like task would have (a) higher GPAs, (b) lower rates of absence, (c) greater levels of expected task performance, (d) greater expectations of positively evaluating themselves for task performance, and (e) greater congruence between self-established standards and actual performance. 2-way analysis of variance (self-evaluation *sex) supported each of the predictions. It is concluded that, in the absence of external rewards, the student sustains his academic behavior by the quality of the covert self-evaluations of his own performance, the positive or negative value of the evaluations depending on self-established standards. (PASAR)

Enneis, W. H. (1969) "Minority Employment Barriers from the EEOC Viewpoint". Symposium of the American Psychological Association: "The Black Man in the World of Work".

Participants in this APA Symposium on "The Black Man in the World of Work" identified four categories of problems faced by the black man: employment barriers stemming from employer attitudes, the lack of acculturation to the working world, deficiencies in job-related skills and the relative absence of attitudes which promote self-realization in a working environment. These, coupled with general racist attitudes, tend to prohibit or constrain black workers from training and employment. Action is needed in many areas, e.g., programs are needed to help develop appropriate work-culture attitudes and to raise ability levels in specific skills. Several existing programs are described and the results discussed. The author deals primarily with employment barriers as the EEOC sees them.

Entwisle, D. R. (1971) "Implications of Language Socialization for Reading Models and For Learning to Read". Reading Research Quarterly 7:111-167.

Presents evidence suggesting large differences among social and ethnic groups in cognitive style in relation to such things as (a) what is attended to, (b) how problems are seen and solved, and (c) how language is socialized. A review of Bernstein's theory of language socialization in relation to educability suggests that he emphasizes the same factors that the reading models neglect, i.e., differences among social groups and social factors in language acquisition. Some extensions of Bernstein's theory to reading are outlined. Recent research on bilingual and bidialectical programs is reviewed in relation to reading. It appears that when foreign programs are compared to United States programs social factors outweigh linguistic factors. (French and Spanish summaries) (6 P. Ref.) (PASAR)

Epps, E.G. (1969) "Correlates of Academic Achievement Among Northern and Southern Urban Negro Students." Journal of Social Issues 25:55-70.

This survey of northern and southern urban Negro students examined family status, personality, attitude scales, students' grades, vocabulary score, and educational aspirations in a correlation matrix. Results suggest that while there are intercorrelations on personality and attitude variables these were not highly related to the academic achievement. Sex and regional differences were noted. Status was found to be unrelated to grades among southern males, northern males, and northern females, but significantly correlated with grades among southern females. Status was strongly related to the amount of expected education and also to vocabulary. Two variables, self-concept of ability, and conformity, showed little regional variation. (PASAR)

Glazer, N. Y. and C. F. Creedon (1968) Children and Poverty: Some Sociological and Psychological Perspectives. (Chicago, Rand McNally)

Some sociological and psychological perspectives on children and poverty are explored in a collection of readings. The theoretical aspects of poverty as children are affected by it are presented in the first section. The concept of relative deprivation, the theorem of the self-fulfilling prophecy, application of sociological theory to socialization, and changing psychological conceptions of development are considered. The second section contains, for the most part, the words of the poor youth and children, both black and white, about the world in which they live; and of adults who speak about their childhood or their children. Racial, social, educational and economic conditions and problems are their subjects. The third section presents some views of the poor: historical aspects of the philosophy of poverty; middle class misconceptions of lower class families; an attempt to classify families of the lower class in a more meaningful way; a search for hidden positives of the poor; and a critical analysis of the role of social work as it relates to poverty. The fourth section deals with various aspects of the psychological development of the child: early childhood development; mother-child relationships; language development in the young child; and adultlike behavior of children; participation in racial demonstrations and the educational aspirations of adolescents. The final section is concerned with sociological and social-psychological consequences of several aspects of major institutions on poor children: the family, the schools, economic opportunity, political power and attempts to eliminate poverty. The book is intended for use in undergraduate courses which focus on contemporary problems in American society as well as for use in institutes and workshops concerned with doing something for the poor. (NCMHI Abstract)

Greeley, A. M. (1969) Why Can't They be Like Us? Facts and Fallacies About Ethnic Differences and Group Conflicts in America. Pamphlet Series No. 12, Institute of Human Relations Press, The American Jewish Committee, 165 East 56 Street, New York, N.Y., 10022. 86p.

This book focuses on a position contrary to the melting pot theory: namely, that group identity persists in America today. Discussed are the nature of ethnicity, the origins of various ethnic groups, the assimilation rate of ethnic groups, competition between ethnic groups, group differences, and the future of ethnic groups. The author distinguishes between cultural and structural assimilation, presents a thesis for the developmental process which may be common to all ethnic groups, and concludes by suggesting new ways in which American politics may deal with the problem of ethnicity in the next decade. (ED 061367)

Greenfield, H. I. (1972) "Recruitment in the Present Economic Climate". American Journal of Public Health 62:765-6.

This study focuses on several factors relating to the recruitment of allied health professionals and particularly on wage differentials. Wage differentials are assessed in terms of Adam Smith's typology of conditions, including: agreeableness of employment; degree of ease and cost of training; constancy of employment; trust or responsibility of position; and probability of success. The cost of acquiring training in the health professions is considered an obstacle. Many occupations are viewed as "dead-ends" offering no potential for mobility. The author notes that recruitment efforts should concentrate on males, minorities, mothers and veterans, and that current emphasis on the quality as opposed to the quantity of life should be of assistance in these efforts, particularly among younger people.

Guerba, M. H. et al. (1969) The Retention of Mexican American Students in Higher Education with Special Reference to Bicultural and Bilingual Problems. Dr. Mayer J. Franklin, School of Education, California State College, Long Beach, California, 90801. 131p.

The problem of retaining Mexican American students in institutions of higher education is reviewed in these 5 papers: "The Retention of Mexican American Students in Higher Education with Special Reference to Bicultural and Bilingual Problems" by Manuel H. Guerra: "Mexicanismo vs. Retention: Implications of Retaining Mexican American Students in Higher Education" by Philip Montez; "Retention of Mexican American Students in College" by Monte E. Perez, Maria Diaz, and Oscar Martinez; "Retention of the Chicano Student as a Comprehensive Program Unit of the Mexican American Student Organization" by United Mexican American Students at the University of California at Los Angeles; and "Problems of Retention as Seen by Mexican American Students" by members of a Chicano ethnic studies class (conducted by Marta Schlatter). Related documents are RC 003 429, RC 003 431, RC 003 432, and RC 003 433. (SW) (ED 031324)

Gurin, P. et al. (1969) "Internal-External Control in the Motivational Dynamics Of Negro Youth". Journal of Social Issues 25:29-53.

Internal and external control were used as a basis for understanding the motivational dynamics of disadvantaged individuals. Data, obtained from 2 studies on Negro youth, were factor analyzed. Several distinctions, important in understanding Negro youth, were related to the locus of control, the effects of fate and chance, and in dealing with systematized social barriers. Aspiration and performance were positively related to belief in one's personal control but negatively related to the general belief about internal control. In dealing with failure, externally oriented youth showed more effective individual aspirations for nontraditional occupations and greater participation in attempts to overcome barriers to Negro achievements. (PASAR)

Hannerz, U. (1968) "The Rhetoric of Soul: Identification in Negro Society". Race 9:453-466.

Discusses the social and cultural implications of the emergence of the concept "soul." The historically impermeable barriers to Negro advancement have been slightly lowered to make success possible. This change has created the need for a philosophic alternative to the type of success defined by mainstream, white ideals; "soul" provides a satisfactory self-concept and cultural solidarity through appreciation for "negroness." Ghetto media (radio, the recording industry, and stage shows) contribute to the vocabulary of "soul" while the origins and reasons for its characteristics can be seen symbolically in "soul" food and music: provision of a modicum of historical tradition, expression of a lack of control over the social environment, and unstable personal relationships. It is an internal, cultural concept rather than a movement such as black militancy. However, as a cultural force, it could be harnessed to create allegiance to a black nationalist political movement. (PASAR)

Harkins, A. M. et al. (1969) Public Education of the Prairie Island Sioux: An Interim Report. National Study of American Indian Education, Series I, No. 10. Chicago University, Illinois; Minnesota University, Minneapolis. Training Center for Community Programs. 91p.

As a part of the final report of the National Study of American Indian Education, this study was conducted at the Prairie Island Indian Reservation located in southeastern Minnesota. The document presents a historical background of the small peninsula (approximately 10 miles long and 2 miles wide) and its inhabitants, the Sioux Indians, which number approximately 25 families (1969). Data were obtained by interviews and questionnaires. Persons interviewed included Indian parents, Indian students, non-Indian students, townspeople, teachers, and school administrators. Factors investigated included low achievement, poor school attendance, and the prevailing attitude of the Indian students and their parents toward education. In conclusion, the document lists 8 tentative recommendations reached through this study, with an overriding theme of an improved communication across intercultural barriers. Appended are data regarding legislation for the Indians, statistics on education of the Indians, and scholastic records of Indian students in the study. (EL) (ED 040797)

Harris, S. add S. Axelrod (1972) "Allied Health Personnel: Some Problems". Gerontologist 12:289-93.

Competent and trained auxiliary health personnel is essential for the care and treatment of the aged. Interviews with 30 administrators of health agencies and hospitals revealed a number of problems hindering the recruitment, training and placement of such personnel: poor coordination of planning; narrow and specific curricula; bureaucratic rigidity; limited career advancement opportunities; and ambiguity in nomenclature. Recommendations include development of better communication between educator and employer; wiser utilization of State and Federal funds to coordinate various programs; reevaluation of certification and civil service requirements; increased use of older women, including disadvantaged women; better career ladder goal structure; and better regional planning agencies to serve as central resource agencies. (Author Abstract Modified)

Hartman, J. J. (1971) "Psychological Conflict in Negro American Language Behavior: A Case Study". American Journal of Orthopsychiatry 41:627-635.

Programs instituted to help Negro Americans rid themselves of "unacceptable" dialect language behavior may involve assumptions of white superiority that foster conflicts of identity and self-esteem. The case study involves a 22-year-old female Negro American graduate student at a Northern University.

The major theme which emerged in an interview was her shame and self-hatred in regard to language, i.e., poor articulation, grammar, and an inadequate command of English on the part of Negroes. Programs designed to teach standard English to Negro Americans should do so without inherent assumptions of the inferiority or pathology of the dialect. (15 Ref.) (PASAR)

Hausmann, E. (1971) "A Program of Dental Career Orientation for Black Junior and Senior High School Students". Journal of Dental Education 35:474-5.

The need to recruit qualified black youth to the schools of dentistry was the basis for this program. Fundamental problems facing many black young people are adverse factors in their environment, wrong educational tract, and few role models to identify with or to emulate. This program was developed to orient youth early in their secondary school education toward the possibility of a dental career. It included a one day orientation for forty students at a time. Participants have the opportunity to play the role of the dentist; to examine their partner's mouth with a mirror and explorer; and to relate to X-rays taken previously. One dental student was assigned to a pair of youngsters to try to develop a personal relationship with them. The author concludes that it is not possible to say whether this program will fulfill the objectives of encouraging black junior and senior high school students to prepare for courses in dentistry. However, the program was positively received which the author attributes to the personalized approach and the provision which allows for active participation on the part of the student.

Henry, J. L. (1969) "The Negro Health Professional. How Can Kentucky Help?" Journal of the National Medical Association 61:327-32.

This article focuses on the need to attract Negroes into the health professions and is specifically directed toward admission and curriculum changes in the University of Kentucky Dentistry Program. The author notes that in the past middle class Negroes often became physicians, dentists, teachers or ministers. The passage of the 1964 Civil rights Act, however, created new opportunities and resulted in a brain drain from the health sciences. Immediate, intermediate and long term solutions are offered. Immediate solutions include the adoption of better testing methods to identify potential; the modification of admission standards; compensatory programs to deal with identified weaknesses and the use of special advisors to assist students. Intermediate solutions include the establishment of recruitment programs at the high school and college levels. Special emphasis should be given to the recruitment of black women since they are especially underrepresented in medicine and dentistry. The long term solution is to end racism. Particular emphasis is placed on the identification of students with potential and the establishment of sound compensatory programs.

Hill, N. (1971) "For Liberty and Equality". Current 29:32-5.

This article is part of a larger article on equality and college admissions written with respect to policy decisions under consideration by the American Civil Liberties Union. The author's main concern is that the ACLU might respond to political pressure and adopt policies which would impinge on individual liberties. An ACLU proposal for preferential treatment and quotas for minority groups is considered an example of such pressure. The author argues that black demands for expanded admissions at Universities must be met, but they must be met without compromising the rights of others. The solution is (1) to adopt an open college admissions policy for students at a level commensurate with their ability; and (2) to offer compensatory education for those admitted without the necessary entrance qualifications. Programs should be designed so that compensatory education is completed within the first two years of college and students are prepared for a single standard of academic performance on the collegiate or specific vocational level.

Hills, J. R. and J. C. Stanley (1970) "Easier Test Improves Prediction of Black Students' College Grades". Journal of Negro Education 39:320-324.

Three predominantly Negro, 4-year, coeducational, public colleges in a Southern state provided the data. All the applicants were required to submit Scholastic Aptitude Test (SAT) scores when applying for admission. The students were given the similar but easier Level 4 of the School and College Ability Test (SCAT) during the orientation program in their freshman year. This test was designed for Grades 6-8. The 2 subtests of the SCAT are shown to predict freshman year grades in the colleges studied significantly better than did the SAT, which was too difficult for many of the enrolled freshmen. Relative improvement in prediction lessened when high school grade average became a joint predictor, apparently because the high school grades of students who scored low on SAT supplied some of the missing intellective components. (PASAR)

Hull, W. F. IV (1969) The "Special Admission" Student and the Colleges. Pennsylvania State University, University Park, Center for the Study of Higher Education. 21p.

This report discusses the "Special Admission" program adapted by Pennsylvania State University (P.S.U.) for "Culturally deprived" students. Deans from the ten colleges within P.S.U. give their views on the program. There was general agreement arrived at among the Deans in regard to the following: the "Special Admission" students will not be separated as a group from other entering freshman; the former students should be assimilated as rapidly as possible into the ranks of the regular students: centralization or at least coordination in selecting the "Special Admission" students was felt essential; these students should be provided with whatever individual attention is required; and, grading methods should not be altered in any way for the "Special Admission" students. The Deans, however, vary as to how far in the future they feel themselves committed to continue their efforts for the "Special Admission" students. (KG) (ED 037487)

Hunt, D. E. and R. H. Hardt (1969) " The Effect of Upward Bound Programs on the Attitudes, Motivation, and Academic Achievement of Negro Students". Journal of Social Issues 25:117-129.

Upward Bound students were evaluated to determine differential effects among Negro and white participants. Analysis over 2 summers revealed significant positive changes in attitude and motivation, and feelings of self-esteem and internal control. These changes were noted in both groups. Comparisons with controls revealed no significant impact of Upward Bound programs. White controls and Upward Bound students maintained stable grades while Negro controls and Upward Bound students showed a decline. It is suggested that while attitudinal improvement is produced by the program, its impact on academic performance is as yet uncertain. (PASAR)

Kadushin, A. (1972) "The Racial Factor in the Interview". Social Work 17(3):88-98

Findings of numerous studies conducted to determine whether racial differences between social worker and client create insurmountable obstacles are discussed. The problem is examined from both a white worker black client and a black worker white client standpoint. The desirability of matching a worker with a client of the same race is discussed. Racial matching is not always a crucial variable. The shortcomings of matching have become more apparent as a result of experience with indigenous paraprofessionals. These people were hired in an attempt to find new careers for the poor. The case aides generally are of the same racial background with many of the same problems of the clients. Research on client preference does not uniformly support the contention that clients invariably select professionals from their own group. The conclusions are not clear cut. Although non-white workers may be necessary for non-white clients in some instances and therapeutically desirable in others, white workers can work effectively with non-white clients. There are special advantages and disadvantages to racial similarity. It is concluded that although white workers may be able to understand and empathize with the non-white experience, non-white workers achieve this sooner, more thoroughly, and at less cost to the relationship. (33 ref.) (NCMHI Abstract)

Klineberg, O. (1971) "Black and White in International Perspective". American Psychologist 26:119-128.

Surveys areas of conflict on the international scene and concludes that the role of racial differences in most is minor or nonexistent. Recent developments in the United States, e.g., black studies programs, black power, and black nationalism, are outlined. Some research findings which add perspective to approches to racism are noted: (a) effects of poverty and overcrowding on learning ability; (b) influence of training and exercise on the development of the brain; (c) consequences of teachers' expectations; (d) value of compensatory learning; (e) changes in performance that accompany changes in environment; (f) importance of motivational and other personality factors in determining test performance and educational achievement; (g) the lack of true correspondence between skin color and measure of social disorganization; and (h) the extent to which perception, cognition and thinking are related to social and cultural factors. The responsibilities and tasks of psychologists in combating racism are briefly discussed. (26 ref.) (PASAR)

Knowles, L.L. and K. Prewitt, eds. (1969) Institutional Racism in America. Englewood Cliffs, N.J.: Prentice-Hall.

"In a thoroughly documented, impressive thesis (the editors) show how 'institutional racism'-- the social arrangements and practices of modern society is so deeply imbedded in the American way of life that whites automatically penalize black citizens..." Library Journal, November 15, 1969, p. 4128.

Koch, M.S. and C. Hollander (1972) "The Health Sciences Careers Program". Health Services Report 87:787-802.

This article focuses on the Health Sciences Careers Programs (HSCP) of the Johns Hopkins Medical Institutions' Center for Allied Health Careers. The programs, which operate in conjunction with several Baltimore high schools, represent an effort to bring disadvantaged but high potential black youths into the health care system. They are specifically designed to involve high school students in entry level health careers and to provide them with marketable health care skills. Financial need is the primary requirement for admission; academic promise is secondary. An additional requirement is that students be in a general rather than an academic or vocational curriculum in high school. Preliminary research reveals that such students have few educational or occupational goals when entering the program and exhibit rising occupational aspirations and ~~motivations~~ for higher education after graduation. Reseach also indicates that offering students academic credit plus a work-study stipend provides the most motivation for disadvantaged students. The history of the program and guidelines for adoption by other institutions are presented in detail.

Kuvlesky, W.P. and G. W. Ohlendorf (1968) "A Rural-Urban Comparison of the Occupational Status Orientations of Negro Boys:. Rural Sociology 33:141-152.

Discusses the occupational status orientations of Negro youth through analysis of data obtained from a recent study of high school sophmores in Texas. Rural and urban differences among Negro boys were explored on the following aspects of occupational orientations: aspirations, expectations, and anticipatory deflection from goals. Findings indicated that both groups maintain generally high level goals and expectations. Given this broad similarity, the urban boys had higher goal and expectation levels than the rural. Rural-urban differences were greater for goals than expectations. Rural and urban respondents were found to experience very similar rates of anticipatory deflection from occupational goals, but differences were observed in reference to the nature of anticipatory deflection experienced. (PASAR)

Kuvlesky, W. P. et al. (1971) "Status Projections and Ethnicity: A Comparison of Mexican American, Negro and Anglo Youth". Journal of Vocational Behavior 1:137-151.

Describes a study utilizing data obtained from Negro, Mexican American, and Anglo youth residing in nonmetropolitan areas of Texas. Ethnic comparisions were made by sex on several dimensions of occupational and educational status projections: levels of aspiration and expectation, anticipatory goal deflection, intensity of aspiration, and certainty of expectation. Findings indicate that the three ethnic groups were generally similar, except in reference to status expectation and intensity of aspiration. Several other consistent but less substantial patterns of ethnic variability were noted: (A) Mexican American youth felt least certain of attaining their expectations, (B) Negro youth held higher educational goals, and (C) Anglo youth experienced the least anticipatory deflection. (PASAR)

Lea, J. and H. Farias, Jr. (1972) "A Summer Health Sciences Experience For Minority Group Students". Journal of Medical Education 47:903-4.

This study focuses on the 1971 Summer Program in Health Sciences sponsored by the North Carolina Consortium for Health Manpower Development. The program was designed to provide minority group students with health related compensatory instructional opportunities and an awareness of actual clinical situations. Thirty-five blacks, one American Indian and one Appalachian white were admitted to the program on the basis of minority group status, indication of preference for a health career, need for compensatory education and completion of at least one year of college. The program was designed to provide as much individual counseling as necessary. Each student selected three science courses on the basis of interest and need. A general studies course, which focused on the development of verbal and study skills, was required. The success of the program is evident from the following statistics: of the 37 participants, 8 are in medical schools, 1 is in dental school, 5 are in nursing, 3 are in public health and 3 are working for graduate degrees in health related sciences. The remaining 17 are still undergraduates. All are showing satisfactory academic progress. Six of those in medical schools have made substantially better progress than other minority medical students who have not attended the program.

Littig, L. W. (1968) "Negro Personality Correlates of Aspiration to Traditionally Open and Closed Occupations". Journal of Negro Education 37:31-36.

Assessed the relationships among achievement motivation, social class identification, and aspirations to traditionally open and closed occupations for 70 male Negro college students. Strong achievement motivation and working-class identification were related to aspiration to traditionally closed occupations; weak achievement motivation and middle-class identification were related to aspiration to traditionally open occupations. (PASAR)

Lyons, J. E. (1972) "The Response of Higher Education to the Black Presence". Journal of College Student Personnel 13 (5):388-394.

This article reports on a survey conducted to determine what students feel is important and where black studies falls on their list of priorities. A great deal of speculation has taken place concerning higher educational institutions' reponse to the black student and what is now happening on college campuses. This speculation prompted the author to do a survey of the policies and practices for meeting the needs of increasing numbers of black students on college campuses to determine how they have profited from the many boycotts, sit-ins and demonstrations. The survey sought to determine whether verbal commitment was matched by commitments of money, staff and facilities. The survey was also structured to determine what students feel is important and where black studies fall on their list of priorities. The colleges were divided into 4 geographic regions with questionnaires mailed to 140 predominately white colleges and universities throughout the country during the summer of 1969. The study focuses on black student enrollment with respect to numbers, percent increases and geographical distribution. It looks at the development of Afro-American Cultural Centers and the increasing number of black student organizations. The author concludes by saying that far too many institutions are not matching their verbal commitments to the area of human relations with a monetary commitment. If colleges and universities are sincere they must begin to incorporate many of the programs and see to it that they are adequately funded. Of the several recommendations made, two are of great significance: (1) that colleges and universities begin to move away from the "special program", agencies, directorships, and deanships and begin to incorporate, where possible, the "black experience" into the university experience; and (2) that institutions make a commitment to human rights and opportunities for at least three years; this commitment must include ample budget and personnel. Far too many black-related programs are structured to fail, and far too many black students are being brought to college with high hopes and then dropped. This situation only contributes to the negative self-images they may already have.

Maryland University, College Park, Cultural Study Center (1972) Annotated Bibliography of Cultural Study Center Studies, 1969-1972. 13p.

This document presents an annotated bibliography of cultural study center studies written from 1969 through 1972. The papers annotated deal with such topics as black student enrollment, racial attitudes of whites, black admissions, black and white vocational choices, black student attitudes, attitudes of Danish persons, grade prediction and racial factors, black student attrition, and the importance of social acceptability in the measurement of racial attitudes. (HS) (ED 062930)

Mathis, H.I. (1969) "The Disadvantaged and the Aptitude Barrier". *Personnel and Guidance Journal* 47:467-471.

The theory and practice of aptitude testing are critically discussed within the context of current efforts to improve the status of the poor. Aptitude testing is contrasted with achievement testing with special attention directed toward underlying assumptions, validation procedures, and the interpretation of test scores. Aptitude tests are found to have profoundly bad effects for disadvantaged applicants. The tests bar them from employment and destroy aspirations in the process. Recommendation is made for a battery of pre-employment tests more closely related to achievement test principles. It is argued that such a battery would be more relevant and hope-redeeming for underprivileged applicants while preserving the advantages of pre-employment ability testing. (Author Abstract)

McClellan, F. M. (1970) "A Black Student Looks at the Present System of Financial Aid". College Board Review 77:10-12.

This article focuses on the present system of financial aid for higher education and its effects on black students. The system is viewed as a chain reaction involving application, acceptance, financial aid grant and matriculation--a chain which operates effectively for whites but not for blacks. Each stage is seen to have deficiencies which act as obstacles to higher education for Afro-Americans. For example, the Parents Confidential Statement (PCS) is seen as confusing and intimidating to most black parents and unnecessary given their generally low income level. A shortened form is suggested. Financial security for the entire college experience is considered essential for motivation and performance. The author concludes that if the system is to operate effectively and allow for more than token participation by blacks, black administrators must be hired to recruit and counsel black youth.

McDiffett, K. E. (1970) Minority Group Involvement in University Life. American College Personnel Association; Miami University, Oxford, Ohio. 11p.

Discrimination against the black American student on college campuses, and its current less blatant forms are discussed. The subtle pattern of discrimination is reflected in the curriculum, in the testing and grading systems, and in cultural events. The bulk of the paper suggests remedies and alleviations for the situation. New entrance requirements, special supportive programs for high risk minority students, and the prediction of relevancies pertinent to their future are considered basic. The focus is on opportunity and competence. Along this line, new recruitment programs and black studies programs are mentioned. Giving minority students a voice in planning and implementing these programs, as well as including their participation on the administrative councils of schools, is stressed. The paper concludes that colleges and universities must involve these students in the many facets of campus life. (TL) (ED 039604)

Melchiode, G. et al. (1970) "Beware of Whites Bearing Gifts". American Journal of Psychiatry 127:803-808.

Describes a study of 4 black students who participated in a special 13th year of schooling in predominantly white private schools. Case histories of an 18-yr-old male, 2 17-yr-old males, and 1 17-yr-old female are presented. It was found that the Ss difficulties in the program resulted in a loss of self-esteem and the precipitation of an identity crisis to which they were particularly vulnerable because of inadequate preparation and the lack of peer support. Recommendations for prevention of these difficulties in other programs are presented. (PASAR)

Meyers, E.O. (1971) "Pride and Prejudice". Journal of Contemporary Psychotherapy 3:105-110.

Discusses the pride of the black man in the face of a history of humiliation and the prejudice of therapists despite their devotion to objectivity. The tendency of those in the helping professions to quickly diagnose pathology, to generalize about disinterest in learning, and to deplore certain housing and kinship patterns is discussed. It is concluded that "The black man is not white! And there is no reason in the world, therefore, why he should be judged, evaluated, assessed and categorized as if he ought to be white."
(PASAR)

Meyers, M. (1972) "The New Black Apartheid". Change 4 (8):8-9.

This article deals with the author's concern about the rising apartheid on American campuses. He expresses the view that this apartheid comes under the guise of Black Studies for blacks, black dorms, and separate admission criteria for black students. He goes on further to say that intellectuals are not using their intelligence and gives reasons why they have reestablished this dual system of education. A social theology exists today that gives the cold shoulder to the many thousands of blacks who do well on college entrance examinations or have exceptionally good academic records. He goes on further to say that admissions officers recruit black youth who are not academically minded but represent the cultural backwardness of the nation's ghetto. Today's "token black" is "blacker" (which means more militant, less educated and poorer) than yesterday's token Negro. One reason administrators have been so willing to segregate blacks from whites lies in the needs of white students for status. Colleges have assumed that all minority students were disadvantaged, and, as students were admitted, they were automatically "tracted" into programs labeled "disadvantaged", "high risk", "New Directions" or "culturally deprived". In 1970, 62% of all black students enrolled in public colleges in New York were put in so-called "opportunity programs". The author concludes by saying that the seventies requires us to be more than "relevant" to the felt needs of the students. We need to equip them with the experience, knowledge and motivation to fulfill their ambitions.

Michigan Education Association (1971) A Selected Annotated Bibliography of Material Relating to Racism, Blacks, Chicanos, Native Americans, and Multi Ethnicity. Volume I. East Lansing, Michigan. 75p.

The primary focus of this annotated bibliography is on material which the Michigan Education Association believes to be most representative of the realities that relate to involvement and contributions of blacks, Chicanos, and Native Americans and the climate of the times during which such involvement and contributions occurred. Its purpose, then, is to provide classroom teachers and educators with a practical instrument by which they can become aware of meaningful resources that will help foster in teachers and students an awareness of and appreciation for the plural ethnicity of our society, which heretofore has been nonexistent in most school environments in America. Additionally, the bibliography is intended to serve as one factor in motivating and facilitating school districts to modify their present curriculum in order to include ethnic and cultural diversity in each curriculum component. Documents date from 1945 to 1972, but the majority of the publications date from the middle and late 60's. Novels, biographies, periodicals, records, films, and filmstrips comprise the 294 entries in this material. (ED 069445)

Miller, D. M. and P. O'Connor (1969) "Achiever Personality and Academic Success Among Disadvantaged College Students". Journal of Social Issues 25:103-116.

Reports predictors of academic success for opportunity award recipients at a university, 85% of whom were Negro. Results indicate that scores on the achiever personality scale of Frickes' Opinion, Attitude, and Interest Survey were strongly associated with the attainment of passing grades as freshman and with academic survival as upperclassmen. The failure of either scholastic aptitude test scores or high school percentile ranks to predict success for men, and of high school performance to predict success for women gives further import to the achiever personality findings. It is suggested that the achiever personality scale be used to identify students who, failing to qualify by usual admissions criteria, nevertheless have a high probability of success at selective colleges. (PASAR)

Milton, O. (1966) Proceedings: A Conference on Student Retention in Tennessee Colleges and Universities (March 21-22, 1966). Tennessee University, Knoxville. 46p.

The objectives of the conference were: (1) to identify the factors responsible for large numbers of students leaving Tennessee institutions of higher education before graduation; and (2) to promote correction of such factors on individual campuses. The proceedings consist of: (1) lists of the individual participants and the participating institutions; (2) the program; (3) the papers delivered at the conference, which included: "Faculty Contributions to Dropouts," by Sam C. Webb, "Administrative Contributions to Dropouts," by George L. Marx, "Steps to Reduce Dropouts," by Donald W. Irvine, and the discussion following the papers; (4) the special questionnaire for evaluating the conference and the analysis of this questionnaire; and (5) a brief note on plans to arrange for systematic interinstitutional research in this area. (AF) (ED 044084)

Morgan, G. D. (1970) The Ghetto College Student: A Descriptive Essay on College Youth From the Inner City. Act Publications, P.O. Box 168, Iowa City, Iowa, 52240. 74p.

The purpose of this study is to describe some of the problems and conditions of the ghetto college student that influence his education. It is based on reading about, observing and talking with these students, their teachers, counselors, and administrators. The black student of today is contrasted with its predecessor. Points of difference between the white educator and the black student that continue to be sources of conflict are identified and various teaching programs are discussed. Traditional methods of instruction are ineffective since ghetto students feel that colleges and universities are unresponsive to their needs. The present capitalistic system is blamed for poverty and discrimination: social action is warranted. There is great need for colleges to reorient their activities, teaching practices, and expectations in light of the sociology of economic deprivations of the inner city students. (AUTHOR/AF) (ED 038918)

Newman, A. (1971) "Tutoring the Culturally Different". Improving College and University Teaching 19:299-300+.

This article focuses on the use of cultural therapy as a part of the student teacher training experience. Data were obtained from 87 students taking a course onthe Social Foundations of Education at the University of Florida. Each student tutored a culturally different individual, usually from the black ghetto, who was having difficulty in a learning skill. One of the focuses of the course was to stimulate emphatic interaction through this one-to-one teaching experience. At the end of the course students completed a questionnaire designed to assess the impact of their experience. The author focuses on student responses to one question dealing with value commitments and prejudices: 16% of the students reported that their original lack of prejudice was reinforced; 25% reported a moderate lessening of prejudice; 7% reported a drastic lessening. Only 1 student indicated that his prejudice was not reduced. The author concludes that teacher education should not be restricted to intellectualizing about cultural differences but should provide an opportunity for direct interaction.

No author (1969) "Black Students in the Health Sciences". Medical Aff. University of Pennsylvania pp. 9-13.

Of 283,000 physicians in the United States today, only 5,300 are black. The ratio is approximately the same for dentists and is lower for veterinarians. This study focuses on the University of Pennsylvania's attempts to increase black enrollment in its health schools. Increasing the representation of blacks is viewed as a special problem requiring special programs. The author notes that 79% of the schools polled are attempting to increase black enrollment, and it is becoming increasingly difficult to find individuals who meet the academic requirements. It is therefore necessary to identify students who have potential ability while they are still in high school. Financial difficulties and lack of confidence are seen as factors which tend to inhibit many students from continuing their education. Students in colleges must also be encouraged. The School of Medicine at the University of Pennsylvania, in conjunction with the Schools of Dentistry and Veterinary Medicine, has established several programs designed to encourage black entry into health professions. High school students are given paid, part time jobs and work in the capacity of lab assistants. The fact that students are given some responsibility appears to stimulate interest. For example, of 13 seniors in one program, 7 applied to the University of Pennsylvania undergraduate schools and 5 were accepted. Similar programs have been instituted elsewhere at both the high school and college levels.

Noar, G. (1971) Sensitizing Teachers to Ethnic Groups. B'nai Brith, New York. Available from Anti-Defemation League. 24p.

This booklet on human relations attempts to convey to teachers the meaning and intent of "learning to live together." Separate sections deal with what teachers need to know about Blacks, American Indians, Mexican-Americans, Puerto Ricans, the disadvantaged, Asian-Americans, Jews, and the many Caucasian ethnic groups. The focus in each race is on their history, social problems, differences with the race, and social differences due to past and present experiences, and in the case of the disadvantaged, on nutrition, environmental influences, and socioeconomic background. (ED 06445)

Owens, C. S. (1967) The Division of Indian Education of the New Mexico State Department of Public Instruction to the Bureau of Indian Affairs. Annual Report, 1966-67. New Mexico State Department of Education, Santa Fe. 44p.

During the past 15 years the average enrollment and daily attendance figures for New Mexico Indian children in the Johnson-O'Malley program have increased. This increase indicates progress by the Indian children in the mastery of language, which has been encouraged by the Division of Indian Education of the New Mexico State Department of Education. Indian children have benefited from the use of Johnson-O'Malley funds by an increase in early childhood education, guidance and counseling services, health services, transportation, textbooks and school supplies, and lunch programs. The guidance section of the Division of Indian Education has had three primary objectives -- (1) encourage self-motivation and self-direction of Indian pupils, their parents, and their teachers, (2) secure more parental involvement in education and citizenship responsibilities, and (3) emphasize cultural similarities of all pupils as a new direction within the total educational situation, while learning about group and individual differences. In order to achieve these objectives, the guidance office became involved in various workshops, conferences, and meetings, initiated two research projects pertaining to school dropouts on the secondary level, and conducted a survey involving Indian students in higher education. The total numbers of Indian children in the Johnson-O'Malley program for New Mexico are included in tabular form. (ES) (ED 017362)

Perry, J. W. (1969) "Career Mobility in Allied Health Education". Journal of the American Medical Association 210:107-10.

This article focuses on the need for career mobility in allied health occupations. Both "ladder" or vertical and "lattice" or horizontal mobility concepts are discussed. Most allied health occupations are considered "dead ends". The author notes that the lack of mobility in some areas is a result of too much or too little education and calls for a balance between educational preparation and job responsibility. Several prerequisites for career mobility are discussed, including: (1) a thorough job analysis for each job level; (2) the establishment of educational programs which match job analyses; (3) the establishment of core curriculum; (4) the development of equivalency testing or credit by examination; (5) the elimination of barriers between associations and agencies and (6) the recognition of the value of associate and certificate level programs.

Peterson, K. D. (1971) "Some Steps for a Beginning Teacher of Navajo Students". Journal of American Indian Education p. 221-6.

This is a personal accounting of how this author approached the many problems involved in bridging the cultural gap between him, an Anglo, and them, the Navajo students. Because the Navajo culture does not encourage individual achievement at the expense of their fellow man, the author was having difficulty in getting answers to his questions from the students in a classroom situation. When he finally recognized that cooperation was an important value for the Navajo he changed his method of teaching and encouraged group projects. In bridging the gap he feels it is most important that certain kinds of individuals be placed in the classroom and then only if they have been properly trained to be aware of the culture and mores of Navajo society. His criteria for the individual, if he is to be effective with his students, demands that he be sensitive, open minded person; one who is willing to learn and appreciate the problems and the beauties of another's way of living. Other steps which he felt were essential toward bridging the gap were learning the language and physical orientation which consists of familiarizing the teacher with the environment from which the students come. He feels that identification with one's culture and past is necessary to give one the foundation on which to build a successful life. These are the keys not only to helping to educate Navajos but to all of education and life.

Pfeifer, C. M. and W. E. Sedlacek (1971) "The Validity of Academic Predictors for Black and White Students at a Predominantly White University". Journal of Educational Measurement 8:253-261.

Examined high school grades and both the verbal (V) and mathematical (M) scales of the Scholastic Aptitude Test (SAT-V and SAT-M, respectively) as predictors of college GPA in groups divided by race and sex. Results indicate that high school grades were not correlated as highly with college grades for black males as for the other 3 groups, although there were no significant differences in the correlation of either SAT-V or SAT-M with college grades. Moreover, the multiple regression equation for the black male group differed from the equations for the other groups in that SAT-V is the predictor of primary importance rather than high school grades. Weights derived on a random sample of the student body caused substantial shrinkage of the multiple regression only in the black male sample. Both black males and females were significantly overpredicted by such weights. The importance of separate prediction equations for race-sex groupings is emphasized. (20 Ref.) (PASAR)

Plaut, R. (1963) Searching and Salvaging Talent Among Socially Disadvantaged Populations. National Scholarship Service and Fund for Negro Students. 13p.

Because Negroes comprise less than 1 percent of the interracial college population, educators must try to identify the many capable disadvantaged Negro high school students and encourage them to attend integrated colleges. The National Scholarship Service and Fund for Negro Students (NSSFNS), in a short-term approach to this problem, advises high school seniors about admission and scholarship opportunities in integrated colleges. Within a 14-year period, NSSFNS has helped 8500 students enroll in 350 accredited 4-year colleges, with over $3,700,000 in scholarships. Despite relatively low National Aptitude and Achievement Test scores, these students had successful college careers, and achieved consistently beyond the level predicted for them. The long-term approach initiated by NSSFNS encourages school personnel to identify and motivate talented disadvantaged students earlier than the 12th grade. In this connection, the New York City Board of Education successfully established a 6-year demonstration guidance project in Junior High School 43 and George Washington High School. More students in the project enrolled in college than non-project students from the same school, and most of the early project graduates continued their education beyond high school in some form. Other projects have grown out of the original demonstration project, but their effectiveness depends on the availability of funds, the school's initial success in identifying the able student, and on individual and group guidance to change both the student's negative self-image and the parent's attitudes. (LB) (ED 013261)

Reboussin, R. and J. W. Goldstein (1966) "Achievement Motivation in Navaho and White Students". American Anthropologist 68:740-745.

Anthropologists have assumed that achievement motivation is not emphasized in Navaho culture. This assumption was empirically tested by comparison of samples of Navaho and white students on an established measure of N achievement. The Navahos were students attending Haskell Institute in Lawrence, Kansas. Data on extent of their acculturation were obtained with an ethnicity index developed by the authors and independently validated. The whites were college undergraduates. Results showed a wide range of acculturation present in the Navaho sample. Acculturation was not related to achievement score. Contrary to hypothesis, higher achievement scores were found for the Navahos than for the whites. Despite the wide range of acculturation found among the Navahos, the results may be due to the highly selective nature of the Navaho sample used. (PASAR)

Rosser, J. M. (1971) Higher Education and the Black American: An Overview. Kansas University, Lawrence. 32p.

At a very young age, a black child acquires a conceptualization or idea of race and the implications that such a conceptualization has for his "survival" and not quality of existence. While contemporary movements are geared toward offsetting some of the consequences, e.g., black self-determination, black power, and black control, blacks, in general, are still faced with the dilemma of identity (personality) development within a society dominated by the institutionalized norms and values of the "intellectual colonizer." Current educational systems, in order to be relevant, must be geared toward: (1) a consciousness which demonstrates concern for quality versus quantity; (2) a consciousness which places emphasis on human outcomes versus inputs; and, (3) a consciousness which deemphasizes product outputs. In addition, black studies can be instituted to meet the specific needs of a black society. Educational outcomes for the future should be geared toward facilitation of individual capacity for decision-making in the presence of substantive options. (Author/SB) (ED 061401)

Saslow, H. L. and M. J. Harrover (1968) "Research on Psychosocial Adjustment of Indian Youth". American Journal of Psychiatry 125:224-231.

The school experiences of Indian children tend to accentuate rather than resolve their identity problems; the outcome is often an increase in behavioral and disciplinary difficulties. At some point between the 4th and 7th grades a decline in academic achievement sets in, and the typical Indian student falls progressively behind his Anglo-American counterpart. It is concluded that effective educational programs for American Indian youth must emphasize the development of adequate psychosocial adjustment. (32 Ref.) (PASAR)

Schoenbeck, P. H. (1970) Motivation: By Whom--For What? Twentieth Yearbook of the National Reading Conference, Inc., 1217 W. Wisconsin Ave., Milwaukee, Wisconsin, 53233. In Press. 7p.

Students who go to a junior community college becuase their grade-point deficiencies in secondary schools block entrance to regular 4-year institutions present motivational challenges to educators. Two of the major problems in motivating a college student when his efforts in the educational system have already been largely futile include lack of adequately trained personnel and lack of suitable educational aims. Adequate teacher training would include anatomy and physiology, psychology, elementary reading, diagnostic testing and interpretation, remedial techniques, and a sociological background sufficient to handle students from various types of environments. A problem more important than trained personnel is providing motivation related to suitable aims and goals. Education to be relevant must fit with reality. The culturally deprived student is practically-oriented and not given to abstract ideas. Since his is operating on a sensori-motor level rather than a cognitive level, it would seem that our structured academic system must undergo a change if it is to educate for reality. First we must find out what reality is for our students, and then educate them accordingly. References are included. (BH) (ED 047915)

Schumacher, L. C. et al. (1972) "Language Compatibility and Minority Group Counseling". Journal of Counseling Psychology 19:255-256.

Investigated how well white counselors and black students understand the vocabulary used by each other in counseling sessions. Linguistic compatibility was found to be low. (PASAR)

Sedlacek, W. E. and G. C. Brooks, Jr. (1970) College Admissions and the Black Student: Results of a National Survey. Maryland University, College Park, Cultural Study Center. 12p.

The purpose of this study was to answer the basic question: what is the gap between published articles on black admissions and actual practices in the schools? Eighty-seven (90 percent sample) large, primarily white institutions returned questionnaires concerning their admissions policies for black students. Results indicated that very few blacks (3 percent of 1969 entering freshmen) are entering the large, primarily white universities. While many schools have established special programs for blacks, the admissions procedures used for these programs and for regular black admissions remain very traditional. Standardized tests and high school grades are widely used while extracurricular acitivites, recommendations and interviews are less used in black admissions. While many schools are conducting research on black admissions there is little reason to expect that admissions policies towards blacks in pre-dominantly white schools will change in the near future. It is proposed that research on black admissions should involve novel approaches to developing predictors and criteria rather than to apply white culturally-bound variables to groups of blacks. Potentially useful variables in predicting the academic success of blacks include a positive self-concept and low conformity. (Author) (ED 040230)

Shaw, J. (1972) "Community Resources Aid In-Service Education Budget and Help Provide Diversity of Courses". Modern Hospital 119:97-99.

Since 1969, nearly 700 of the 2,300 employees of the University of Chicago Hospital have participated in the hospital's in-service education programs. The hospital has tapped a wide variety of community resources for assistance in this effort. Programs have been developed to increase clerical, laboratory and nursing skills and are specifically geared to allow nonprofessional employees to advance in several career areas. Basic education courses are offered to those who poor educational background makes them initially ineligible. An 18 month program for LPN's which leads to an RN and Associate of Arts degree and a laboratory assistant certification program are discussed. Part of the philosophy underlying the programs is that education must be tied to job mobility and must be flexible enough to allow individuals to take the courses they need, i.e., it must not require them to meet arbitrary education standards.

Smith, P. M. (1971) "The Role of the Guidance Counselor in the Desegregation Process". Journal of Negro Education 40:347-351.

Discusses 3 kinds of concerns which affect the environment in which guidance specialists have been operating: (a) the background and practices that surround desegregation, (b) the image of the traditional guidance counselor, and (c) the force of black solidarity. Desegregation is viewed as the act of removing racist practices that prevent equal access to opportunity in public education. Most methods employed to desegregate are carried out on the prevailing assumption of white superiority. Counselors have had success with upper- and middle-class students, but their record with lower-class students is poor. This failure is attributed to the attitudes, training, and lack of cooperation between black and white counselors. Black youth are strongly motivated by interest in their own culture but are equally concerned about their role in the larger society. It is concluded that a revised guidance model should: (a) prepare the counselor to protect the students against dehumanization, (b) sensitize the counselor to the life styles of the students he serves, (c) interest the counselor in orienting black and white students to a new school, and (d) encourage the counselor to play a vital role in the eradication of racism. (PASAR)

Southern Regional Education Board, Institute for Higher Educational Opportunity (1970) The Black Community and the Community College. Action Programs for Expanding Opportunity, A Project Report. Atlanta, Georgia. 60p.

This report describes several action programs to illustrate innovative procedures that show promise of increasing the enrollment of black students and providing programs of such distinct value as to keep them in school. An effective program for recruitment requires cooperation between admissions and counseling personnel of the college and high schools. Recruiting will be more effective when representatives of the college visit the high schools and black high school students visit the colleges. Recruitment should reach into the community through public schools as well as other channels. Effective recruiting requires community-wide moral and financial support. Special services should be made available to black students between the time of application and actual entrance into classwork. The admission of culturally disadvantaged students calls for adaptations in curricular offerings to meet student needs. An increase in the number of black students in a junior college should be accompanied by a study of career opportunities and manpower needs and by the addition of new instructional programs to prepare students for these opportunities. The junior college drop-out rate may be reduced by expansion and innovations in the area of special student counseling services. Action by the state of Florida is cited as an example of statewide planning that may improve higher educational opportunities for blacks. (AUTHOR/CA) (ED 046380)

Spang, A. (1971) "Eight Problems in Indian Education". Journal of American Indian Education 10:1-4.

This article relates the problems the author views as the reasons that Indian education has not progressed, developed or evolved into a dynamic field. In analyzing the situation he categorized the problems into eight broad areas: lack of money, irrelevant curricula, lack of qualified Indians in Indian education, insensitive school personnel, differing expectations of education programs, lack of involvement in and control of educational matters, difficulties of students in higher education, and too many instant-Indian education experts. The reasons that the Indian has a negative self-concept of himself and questions the intelligence of his parents are explored in some detail. He concludes by saying that unless the Indian is involved in implementing that which he developed; provided with an adequate educational background; and allowed to use the mother tongue, no progress will be able to be made in the ongoing education of the Indian student.

Stanley, J. C. (1970) "Predicting College Success of Educationally Disadvantaged Students". Center for Social Organization of Schools Reports, Johns Hopkins University, No. 79, 40p.

Reviews the literature and concludes that admission to selective colleges should be based substantially on test scores and high-school grades, whether or not the applicant is from a minority racial, ethnic, or socioeconomic group. "Open admissions" is seen as applicable to state and local systems of higher education, but not to every individual college and university. Principles of prediction, learning, and guidance would lead to the placement of college applicants in institutions that are neither too difficult nor too easy for each individual. The gap between the academic promise of educationally disadvantaged applicants and the usual minimum demands of the institution should not be greater then provisions for remediation, tutoring, coaching, and perhaps curricular reform can bridge. (6 p. ref.) (PASAR)

Stanley, J. C. and A. C. Porter (1967) "Correlation of Scholastic Aptitude Test Scores with College Grades for Negroes Versus Whites". Journal of Educational Measurement 4:199-218.

Scholastic aptitude test verbal and mathematical scores predict freshman yr. grade-point averages about as well for Negro men students in essentially Negro colleges as for Non-Negro men in other state colleges. Predictive efficiency is greater, however, for Non-Negro women than for Negro women. Combined with high school grades the multiple R's for both Negro men and women is about .6. (PASAR)

Sue, S. (1973) "Training of 'Third World' Students to Function as Counselors". Journal of Counseling Psychology 20(1):73-78.

A study of training of minority students to function as counselors is reported. Ethnic minorities often are unable to relate to the process of psychotherapy, particularly in the case of ethnically conscious students. In order to provide more responsive counseling services, minority students were trained to function as counselors for other minority individuals. In spite of initial difficulties in developing trust and in defining the goals of the program, the training and utilization of minority group paraprofessionals are feasible alternatives to current mental health services on campuses. (Author Abstract) (NCMHI Abstract)

Toole, J. R. et al. (1970) "Attracting Young People Into Careers in the Health Professions". Journal of Medical Education 45:415-20.

This different approach to recruitment of young people into the health professions was tried with 8 students age 16-19, seniors in high school, or freshmen or sophomores in college. The program was designed to give these students, who had not made up their minds about their career choice, an insight into the inner workings of a hospital and the many roles of the health professional. The 6 week summer program had a curriculum designed to stimulate the students' interest in the health professions in general and in particular the neurosciences. They were taught to find reference materials and were encouraged to develop reading habits that would be useful to them in college. For purposes of assessing students' attitudes there were pre and post interviews. The students at the end of the summer indicated that the program had satisfied their primary goal of learning what goes on in a hospital. Prolonged and informal contacts with medical students were judges to be the most worthwhile activity in the program. The students' preconceived ideas about careers in the health professions had become more realistic by the end of the program. The author feels that the training program helped the students to decide on career choices. He concludes by saying that because most students make their vocational choices in high school before they have even seen or heard of a paramedical field it becomes increasingly important that in the recruitment of young adults an experience of this type should be provided.

Turner, J. H. (1972) "Structural Conditions of Achievement Among Whites and Blacks in the Rural South". Social Problems 19:496-508.

Studied achievement motives and value orientations among black and white adolescent males in 8 small communities in the rural South. Significant differences between white and black achievement scores were observed, leading to a search for the structural conditions best accounting for these differences. The generally low achievement among blacks was attributed to general patterns of community oppression. Low achievement motives were linked to the caste-like occupational structure as it apparently influenced black family socialization, whereas low achievement value orientations were associated with perceptions of opportunities for mobility among blacks. These conclusions are felt to have implications for the general literature on achievement as well as for the current "culture of poverty" controversy. (PASAR)

Vontress, C. E. (1968) "Counseling Negro Students for College". Journal of Negro Education 37:37-44.

Views the role of the college counselor as crucial for the progress of the Negro people in that an aggressive attitude toward the candidate and his parents can optimize enrollment and continue the movement toward equality. The duty of the counselor to inform college admissions offices of the strengths of Negro students despite modest test scores is discussed. Possible sources of scholarship aid are noted. (PASAR)

Waldman, H. (1972) "Vocational Expectations of Students in a Hospital Career-Opportunity Program". Hospital Community Psychiatry 23:96-7.

This study focuses on 31 trainees in the Youth Opportunity Training Program at Rockland State Hospital, Orangeburg, New York. The Program employed and trained high school students from low income and disadvantaged areas for attendant level work and was specifically designed for those who were apathetic or hostile or had inadequate finances to continue their education after high school. It was hoped that some of the students would choose to work in state hospitals once they graduated from high school. The study revealed that despite their deprived environment, most students had vocational goals prior to entering the program. None of them expected to be hospital attendants and many had goals that were quite unrealistic. Most students appeared to become discouraged with the program as it progressed, leading the author to conclude that motivation toward some level of attendants work should be a prerequisite for admission. The study emphasized the need to direct students toward more realistic goals.

Washington, B. B. (1970) "Perceptions and Possibilities". Personnel and Guidance Journal 48:757-761.

Discusses the need to assist black students in solving the problems that are peculiar to them, and to help school personnel who are in daily contact with them. Counselors must realize how influential they are in helping youth form images of themselves and attitudes about their world. These students need help in channeling their energies toward constructive ends and in developing positive outlooks about life. (PASAR)

Wells, R. N. (1971) Short-Term Training Program. The American Indian Student in Higher Education. Saint Lawrence University, Canton, New York, 73p.

The participants in the Training Program on the American Indian Student has 4 major objectives: (1) to obtain a working knowledge of Indian values, culture, unique historical experience in our society and contemporary problems; (2) to develop an attitude of respect and concern for Indian life styles and for the Indian student's need to preserve them, and to preserve his own cultural identity within the dominant non-Indian culture; (3) to develop skills in recognizing the myriad of problems facing the Indian as an applicant to college and as a student striving toward a successful college experience; and (4) to develop programs to meet these problems with solutions compatible with the Indian student's goals. This document presents a general outline and evaluation of the program. Several needs of the program are identified: (1) more Indian registrants; (2) a full-time Administrative Assistant; (3) on-campus living; (4) advanced reading and preparation by registrants; (5) more emphasis on comtemporary problems; and (6) workshops. Strengths and weaknesses of the program are listed. It was concluded that the time and money invested in the training program achieved maximum benefits for the participants. (ED 067996)

Wenrich, J. W. et al. (1971) Keeping Dropouts In: Retention of Students Identified as High Probability Dropouts. San Mateo College, California.

The purpose of this successful experimental program at the college of San Mateo was to determine whether active participation in an individualized instructional program such as the Learning Center would be related to a lower level of attrition of first-time freshmen who are identified as high probability dropouts. Forty-nine potential dropout students who were actively involved in the learning center were compared with forty-nine potential dropouts who received no special treatment. The experimental program was proven effective by both measurable and subjective evaluation. Tutoring by other students was considered the heart of the program, with flexibility the key experimental feature. It is felt that the most important aspect of the Learning Center approach is the integration of individualized academic services with supportive psychological atmosphere and personal counseling. (CA) (ED 047684)

Whittico, J., Jr. (1970) "The Future of Medicine and the Recruitment and Education of Minority Groups in Health Fields". American Journal of Medical Technology 36:84-90.

This study was initially presented in a session on "The Future of Health Care" at the 37th Annual ASMT Convention and Exhibit, in Philadelphia, June,

1969. The need to provide better health care, to train adequate numbers of physicians and technologists and to create more health facilities is stressed. The high rejection rates of applicants with average scores on medical admissions exams are seen as evidence of the shortage of medical schools, and revolutionary changes in the admissions policies and curriculums of existing schools are called for. The author charges that the U.S. has failed to train enough doctors and technologists, black and white. Only 1 in 5,000 Negroes becomes a physician as compared to 1 in 670 whites. Several solutions are offered: (1) strong recruitment programs must be developed and more moral and financial support should be made available; (2) the advantages of health careers must be publicized; (3) a type of "medical buddy system" should be developed such that counselors and teachers encourage and direct proteges from high school or college through medical training. The program would be specifically geared to encourage youths, particularly black youths, to enter the field; and (4) medical schools must create more opportunities for average and underprivileged students.

Zirkel, P. A. (1971) "Self-Concept and the 'Disadvantage' of Ethnic Group Membership and Mixture". Review of Educational Research 41:211-225.

Although the findings concerning the relationship of self-concept to ethnic group membership and mixture seem equivocal and inconclusive, it is safe to say at least that ethnic group membership and mixture may either enhance or depress the self-concept of the disadvantaged child. Whether self-concept is significantly affected depends to a large extent on the efforts that society and the schools expend on desegregation and the disadvantaged.Whether such programs as bilingual-bicultural education and black studies can use the so-called "disadvantages" of ethnic minority pupils for their scholastic self-realization merits the attention of schoolmen and scholars alike. (5 p. Ref.) (PASAR)

Zirkel, P. A. (1972) "Enhancing the Self-Concept of Disadvantaged Students". California Journal of Educational Research 23(3):125-137.

A review of the research, revealing a growing recognition of the importance of self-concept enhancement in the education of disadvantaged minority group students is presented. Exploratory and evaluative efforts to enhance the self-concept of disadvantaged students have utilized as their basis the regular curriculum, ancillary services, significant others, and special programs. Those efforts based on the regular curriculum have focused on the creative use of language arts materials and are yet to be fully evaluated. Those efforts involving ancillary services have been basically limited to tutoring and counseling and have yielded generally disappointing results. Efforts involving significant others have revealed the importance of parental involvement and teacher training. Finally, those self-concept enhancement efforts constituting more comprehensive compensatory programs have yielded more promising results when based on ethnic pride and college opportunities. Further research is both necessary and desirable in this increasingly important area. (Journal Abstract Modified) (NCMHI Abstract)

PART II

RESEARCH REPORTS

Atchison, C.O. (1968) "Relationships Between Some Intellectual and Non-Intellectual Factors of High Anxiety and Low Anxiety Negro College Students". Journal of Negro Education 37:174-178.

It was hypothesized that it the MA indicates drive state and performance, comparison of scores to achievement would indicate whether anxiety functions as a disruptive or energizing force. 51 students with low and 42 students with high MA scores were compared using grade-point average to measure performance, and the Otis Quick Scoring Test to determine IQ. Results showed that level of anxiety tended to be positively related to both intellectual and nonintellectual factors for both high and low groups. Failure to substantiate previous findings using students are discussed in terms of the experimental characteristics of the study. (PASAR)

Bartee, G. M. (1968) "The Perceptual Characteristics of Disadvantaged Negro and Caucasian College Students". Dissertation Abstracts 28:3455-A

Purpose of the Study

This research was designed to investigate the specific elements of self concept and perception of the environment, to determine whether there existed any substantial difference between the perceptual characteristics of disadvantaged Negro and Caucasian college students, and what impact the college experience had on these characteristics.

Procedure

Those college students designated as disadvantaged for this research were determined on the basis of two factors: 1) At least one of their parents had not attained a high school diploma and neither of them had gone beyond high school; 2) The family income qualified them for financial aid to education according to the United States Office of Education scale.

The 270 subjects for this research were selected from full-time students enrolled at a private Negro college and those at a newly integrated state university. By random sample, fifty disadvantaged freshmen and fifty disadvantaged seniors were chosen from each institution. A control group of fifty Caucasian and Negro undisadvantaged students was chosen, as well as a group of twenty disadvantaged Negroes from the state university, to determine whether any significant differences existed between disadvantaged Negroes at the two institutions. The freshmen and seniors of each race were combined to make Groups 7 and 8 for the sake of comparison of the total racial groups.

The sources of data for this research were two standardized published instruments: The Myers-Briggs Type Indicator as an evaluation of perception of the environment and the Tennessee Self Concept Scale as an evaluation of self-perception.

The experimental study was designed to test sixteen null hypotheses, half of which involved the data gathered from each of the two instruments.

The data were analyzed by the use of one-way classification analysis of variances and t tests.

Findings

Differences significant beyond the .05 level of confidence were found in twelve of the sixteen hypotheses, causing the rejection of the null hypotheses. Only four of the null hypotheses were accepted, all concerning the Myers-Briggs Type Indicator.

Conclusions

The findings of the present research implied that there seemed to be little change in perception between the freshman and senior levels of higher education, the disadvantaged college students were not found to deviate in negative ways from the control group, and the patterns of group mean scores tended to be more closely related to race than socioeconomic background.

The findings from the data gathered on the Myers-Briggs Type Indicator showed that the differences in personality type between the groups were primarily based on strength of tendencies rather than differences in types.

The increase in factual orientation of seniors over freshmen of both races indicated that disadvantaged college students became less flexible and less creatively inclined with four years of higher education. The orientation toward organization rather than adaptation to the environment, particularly in the Negro groups, reinforced the implications of rigidity in the disadvantaged college students.

The pattern represented by the Tennessee Self Concept Scale group mean scores indicated that both the disadvantaged and control group exhibited low self concepts, with high levels of contradiction within the various elements of self perception. Two of the Negro groups showed the highest self concept scores, and the findings of this study tend to refute those of many previous researchers concerning low self concept in Negroes as compared to Caucasians and in the disadvantaged as compared to the undisadvantaged. An important factor was that the control group of undisadvantaged college students showed the lowest self concept of all the groups studied and none of the disadvantaged groups showed extremely low self concepts.

The findings of this study supported previous evidence found in studies of younger disadvantaged Negro children concerning freedom from self blame, defensiveness and readiness to blame others for their difficulties, but contradicted the existence of these characteristics found in the disadvantaged Caucasian children in other studies.

The contradiction between the present study of disadvantaged college students and other studies revealing low self concepts in young disadvantaged children, particularly Negroes, indicated that the availability of higher education to the disadvantaged, particularly Negroes, has had positive effects on their self esteem and self concept. The increase in self esteem from the freshman to the senior year in college, particularly in the Negro sample, emphasized the implications of the positive value of higher education for the disadvantaged. (Taken from Dissertation Abstracts)

Borup, J. H. (1971) "The Validity of American College Test for Discerning Potential Academic Achievement Levels: Ethnic and Sex Groups". Journal of Educational Research 65:3-6.

Examined the relationship between past achievement (high school quarter), the American College Test (ACT), and 1st Semester College GPA. 520 freshmen were selected by a random technique from 996 Ss. Equal numbers of male and female, Anglo-American, and Mexican-American Ss were studied. Achievement scores were obtained from Ss' transcripts. 2-way analysis of variance indicated that high school quarter rankings were better indicators of potential college achievement than act. It is also demonstrated that the act has a built-in sex and ethnic bias favoring male and Anglo-American Ss. 2 solutions are discussed as remedies for the problem. (PASAR)

Bruckman, I. R. (1971) "Vocational Expectations and Aspirations in Mexican-American Schoolchildren". Revista Interamericana De Psicologia 5:39-46.

Investigated vocational expectations and aspirations in Mexican-American 8th grade children. Data were Ss' responses to questionnaire items about their own expected and wished vocations and about their fathers' vocations. Results, based on chi-square analyses, support hypotheses that (a) expectations and aspirations are not equivalent (P .001); (b) Mexican-American Ss express significantly (P .001) lower levels of vocational expectations and aspirations when compared with those previously noted in other ethnic groups; and (c) the observed ethnic differences persist (P .001) when the data are analyzed within socioeconomic lines. Implications for educational and vocational achievement are noted. (SPANISH SUMMARY) (17 REF.) (PASAR)

Burbach, H. J. and M. A. Thompson (1971) "Alienation Among College Freshmen: A Comparison of Puerto Rican, Black and White Students". *Journal of College Student Personnel* 12:248-252.

Administered the Dean Alienation Scale, a 24-item multidimensional measure of alienation comprised of 3 subscales designed to measure the components of interest, to 145 black, 525 white, and 55 Puerto Rican students in a large northeastern university. An attempt was made to compare the scores of the Ss on alienation and 3 of its components powerlessness, normlessness, and social isolation. The T-Test was employed to compare group means. Findings indicate significant differences (p .05) among at least 2 of the groups on each of the components. The Puerto Rican sample was believed to be nonrepresentative of the urban Puerto Rican population, limiting the generalizability of the results. Implications for the role of the university are outlined. (17 ref.) (PASAR)

Caplin, M. D. (1969) "The Relationship Between Self Concept and Academic Achievement". *The Journal of Experimental Education* 37:13-16.

It was hypothesized that children, both white and Negro, attending a de facto segregated school have less positive self concepts than do children attending desegregated schools, and that there is a significant positive relationship between self concept and academic achievement. Sixty children from the intermediate grades of each of the elementary schools in a small city in nothern New Jersey were matched on the basis of age, grade, sex, race, intelligence, and socio-economic status. Analyses of variance were computed on the scores obtained from the self-report instrument administered and correlations between these scores and achievement scores were calculated. It was found that children attending the de facto segregated school had less positive self concepts. There was also a significant positive relationship between self concept and academic achievement. That is, those children having more positive self concepts had higher academic achievement. (Author Abstract)

Centra, J. A. (1970) Black Students at Predominantly White Colleges: A Research Description. Educational Testing Service, Berkeley, California and Princeton, New Jersey. 23p.

The purpose of this report was to determine how background characteristics, activities, goals, and perceptions of black students at predominantly white colleges differed from their white counterparts. Findings were used from several sources, especially the "Questionnaire on

Student and College Characteristics" (QSCC), as a basis for identifying the similarities and differences of a sample group of 249 black students at 83 traditionally white institutions and a matched group of white students, and they were related to other research evidence. Findings indicated that there were more similarities than would have been predictable. Black and white students were involved equally in over half of 25 extracurricular activities; they rated 8 possible goals in attending college similarly, with slightly fewer than half of both groups ranking the intellectual-academic goal first; and both groups perceived the general features of the college environment in the same way, though the "racial" environment was viewed quite differently. Black and white students differed in background characteristics; black students came from lower socioeconomic backgrounds and consequently had to rely on scholarship or part-time work as sources of financial support. A higher proportion of black students (82% vs 74% of the white students) planned to attend graduate or professional school.(AF) (ED 042420)

Cosby, A. (1971) "Black-White Differences in Aspirations Among Deep South High School Students." Journal of Negro Education 40:17-21.

Attempted to test the hypothesis that black youth have lower levels of occupational aspirations than white youth. 5,992 10th graders in the Deep South were interviewed using a standard schedule. Results indicate that 66% of the white students had high level occupational aspirations vs. 60% for blacks. When socioeconomic variables were controlled there was a failure "to find a consistent tendency for whites to express higher aspirations . . . the black students had higher level aspirations in the majority of comparisons . . . " No statistical significance tests are reported. Differences between this study and others on the topic are explained as due to controls applied in this study and increased aspirations of Southern blacks. (PASAR)

Cramer, S. H. and R. R. Stevic (1970-71) "A Review of the 1969-70 Literature: Research on the Transition from High School to College". College Board Review 78:22-28.

This article is an annual review of the research literature relating to high school-to-college transition. The authors picked out 7 studies which they considered to confirm or reject important hypotheses, offer new and promising fields for exploration, or suggest appropriate practices. A bibliography including 45 citations from 17 professional journals is appended. Seven areas were reviewed by the authors including: (1) Predictability of the atypical--The primary conclusion reached in one study was that while high school grades are consistently the best single predictor of college grades for white students, they "do not consistently make the greatest contribution in predicting college grades for black students." (2) Problems of transfer--In this report the investigators attempted to determine what types of students are transferring and what determines whether they are admitted. One result indicated that there is a shortage of financial aid and space for transfer students. (3) Values and the counselor--The counselor's recommendation of a student is valued highly by college admissions offices. This report documents how susceptible these recommendations are to the overt expressions of value judgments on the part of the counselor. (4) Student morality--Student cheating was the chief interest of this report. The author concludes by saying that institutions place such fantastically high expectations and burdens on students that they have no recourse except to cheat. (5) College withdrawal and factors in withdrawal--From these studies implications were drawn that suggest that involvement of the school counselor and college bound student must go beyond mere placement activity, that personnel at the college level may need to alter their approaches to providng assistance and institutions must begin to alter those aspects which contribute to the withdrawal of students. Two other areas reviewed were assessment for college entrance and the decline in research efforts in this area of transition from high school to college.

Dicesare, A. C. et al (1970) Non-Intellectual Correlates of Black Student Attrition. Maryland University, College Park, Cultural Study Center. 14p.

Black undergraduates at the University of Maryland, College Park who registered for the Fall 1969 term, but not for the Spring 1970 term were compared with blacks who registered for both terms on 29 demographic and attitudinal items from the University Student Census. Thirteen percent of the blacks were non-returnees, compared to 15 percent of all undergraduates. The results indicated that the blacks who returned to their studies at the University have more self-confidence and higher expectations, feel more strongly about the University, and are more likely to live on campus and make use of its facilities than do non-returning blacks. In other words, it is likely that the blacks who stay in school have a strong self-concept and take a more realistic look at the University and adapt to it to achieve their own goals. (AUTHOR/AF) (ED 049714)

Epps, E. G. (1969) "Negro Academic Motivation and Performance: An Overview". Journal of Social Issues 25:5-11

The author presents an overview of several papers presented for publication in this volume. With all the research done on black-white differences, the quality of education, racial and academic performance and "social unreadiness", the author feels that the one question researchers should continue to address themselves to is whether the apparent deficiencies exhibited by many Negro students is due to lack of cognitive skills, inadequate motivation or conflicting values. He reviews the following papers: Critique of Personality Approaches, Correlates of Academic Achievement, Effects of Desegregation on Motivation and Achievement, School Versus Class Desegregation, Sense of Control as a Motivational Variable and Expanding Opportunities and Motivation. One paper suggests that there are dangers in assuming that the motivational patterns that lead to success among whites will be equally effective for members of a subordinate ethnic group. From another paper the conclusion drawn was that the task of providing positive changes in the academic performance of culturally disadvantaged high school students, whether Negro or white, will require continued cumulative effort. He theorizes that the current dilemma of the Negro Americans today is that this society is tailored for someone else. He goes on further to say there is strong evidence and support for the belief that changes in the educational environment will prove more effective than programs designed to change the personal characteristics of the students.

Fox, J. V. D. (1971) "Allied Health Student Perceptions of Campus Environment". American Journal of Occupational Therapy 25:364-6.

Since it is important that a professional person exhibit flexible, innovative thinking and behavior, the environments in which allied health students are trained need to enhance creativity. With the cooperation of 60 volunteers from one school of health-related professions it has been demonstrated that certain dimensions of the campus environment were perceived as less potent by students who scored high on creativity tests than by their less creative peers. These dimensions included group spirit, political awareness, and morale on the campus. Guilford's Divergent Thinking Tests and the College and University Environment Scales (CUES) were used to test creativity and perception. CUES is discussed in detail. Data is too limited to permit application in other environments; however, selection and environmental manipulation are suggested as directions for possible future application to improve the creative student's perception of the campus environment. (Author Abstract Modified)

Fundak, C. P. and L. H. Kreit (1971) "Sociometrics in Predicting Dental Hygiene Student Success". Journal of the American Dental Hygiene Association 45:27-9.

The Dental Hygiene Aptitude Testing Program (DHATP) assists admissions committees in the evaluation of applicants. Aptitude subtests have proven to have predictive utility for academic success; however, personality tests have not. This study attempts to determine (1) whether peer ratings can serve to predict student performance in a dental hygiene school and (2) whether peer ratings correlate with the personality section of the Dental Hygiene Aptitude Test. Thirty-five seniors and 6 faculty members at two Northern California dental hygiene schools were asked to complete questionnaires. Specifically, they were asked to list the top three individuals in their class on the basis of (1) who they would choose as their own dental hygienist; (2) technical skills and knowledge; (3) ability to "get along"; and (4) professional ethics and integrity. Information on actual grade point averages, DHAT scores and achievement variables was also obtained. All variables were correlated and presented in a matrix of Pearson Product-Moment Correlations, with the following results: (1) Peer ratings were shown to be a valid criteria for predicting student performance and (2) the DHATP personality test did not measure success factors, i.e., there were no statistically significant correlations between personality test scores and academic achievement nor did peer ratings produce significant correlations with these scores.

Green, R. L. and W. W. Farquhar (1965) "Negro Academic Motivation and Scholastic Achievement". Journal of Educational Psychology 56:241-43.

This study focuses on the relationship of personality and cognitive factors to academic achievement. Separate samples of 223 black and 515 white male and female Michigan high school students were tested for verbal aptitude, academic motivation and academic achievement. Academic motivation tests showed significant correlations with academic achievement for all groups. With the exception of black males, verbal aptitude tests were also significant for achievement. This exception is considered a significant finding which warrents further research. The Self-Concept-Word Rating List (WRL) was the best predictor of achievement for black males and females. The author notes that this reinforces findings on the relationship between self-perception and school achievement and emphasizes the relationship between nonintellectual factors and performance. He concludes that it is possible that many black students, especially males, are being graded on other than academic performance. Social desirability may be one criteria.

Hager, P. C. and C. F. Elton (1971) "The Vocational Interests of Black Males". Journal of Vocational Behavior 1:153-158.

Compared the inventoried vocational interests of black and white male freshmen. It was hypothesized that blacks, more than whites, should show interest in social service occupations on the SVIB. A statistically significant difference existed between both groups, supporting the research hypothesis. (PASAR)

Hall, L. H. (1972) "Personality Variables of Achieving and Non-Achieving Mexican-American and Other Community College Freshmen". Journal of Educational Research 65:224-228.

Measured need to achieve and other personality variables of 468 middle- and low-socioeconomic status (SES) college freshman by the D.C. McClelland TAT of n-Achievement (n-Ach) and the Inventory of Self Appraisal (ISA). Groups consisting of 111 lower SES Mexican-Americans, 150 lower SES Anglo-Americans, and 207 middle SES Anglo-Americans, were identified. Analyses of variance between SES groups and academically achieving ("C" average and above) and nonachieving Mexican-American Ss were calculated. Academic progress over a 5-semester period was observed. N-Ach did not differentiate SES groups and subgroups. Five of six ISA scales distinguished between low SES Mexican-American and middle SES Ss. One ISA scale distinguished between lower SES subgroups. N-Ach and one ISA scale distinguished between achieving and nonachieving lower SES Mexican-Americans. (PASAR)

Hartnett, R. T. (1970) "Differences in Selected Attitudes and College Orientations Between Black Students Attending Traditionally Negro and Traditionally White Institutions". Sociology of Education 43:419-436.

Determined what educationally relevant differences exist, if any, between 2 groups of black collegians who enter traditionally black colleges and those who enter integrated ones. On the basis of data from the college student questionnaires (Part I) (CSQ-1) and the Scholastic Aptitude Test (VERBAL) (SAT-V), black students entering integrated institutions were found to have higher SAT-V scores, to be more independent, liberal, concerned with social injustice, and to aspire to more years of formal education. CSQ-1 data were obtained from 3,104 Ss at 9 black colleges and 323 Ss at 21 integrated institutions. SAT-V data were obtained from 100 Ss at both black and integrated colleges. Many of the differences between the 2 groups, however were found to be highly correlated with SAT scores. Thus, it would appear that to the extent integrated institutions are attracting the higher ability (as measured by the SAT) black students, they are also attracting those with a quite different set of attitudes, background characteristics, and orientations toward college. In view of recent efforts on the part of integrated institutions to attract black students, such facts are important to recognize and consider, for the practice of focusing on students with higher SAT scores is also bringing about a redistribution of behavior styles and personality characteristics that contributes critically to campus environments. (17 ref.) (PASAR)

Hedegard, J. M. and D. R. Brown (1969) "Encounters of Some Negro and White Freshmen with a Public Multiversity". Journal of Social Issues 25:131-144.

How do Negro and white freshman at a large public university appear at entrance and after 1 year? Data are presented on several personality scales, demographic variables, environmental perception measures, and aspiration levels as well as analyses of a large item pool of students at entrance and at the end of 1 year. Negro male students differed least from white students while Negro females presented a more divergent picture and greater challenge to the liberal arts curriculum. The implications of these data for college curriculum, counseling, and recruiting are explored. (PASAR)

Just, G.A. (1970) American Indian Attitudes Toward Education in Select Areas of South Dakota. Inter-Library loan from the Library at South Dakota State University, Vermillion. 129p.

Two self-defeating assumptions represent recurrent themes in the literature of American Indian education. One assumption explains Indian education underachievement as stemming from value conflicts with the dominant culture; the second explains underachievement on the basis of poverty and isolation. The two assumptions imply that the Indian lacks motivation, that his cultural orientation prevents him from achieving educationally, and/or that widespread poverty -- with its resultant social and physical isolation -- intensifies the first two conditions. The present study found an inverse relationship between favorable attitudes toward education and Indian cultural identification. A large majority of the 46 Indians who were given the study questionnaire were positively predisposed to continue their education at the college level. The sample was composed of 16 full-time college students, 13 part-time college students, and 17 college-eligible high school graduates who had never enrolled in college. The study found that conditions of limited income did affect educational advancement. Lack of motivation to pursue college programs was not found. Increased education was found to be positively associated with increased identification and/or acceptance of the white culture. (JH) (ED 046577) *

Kapel, D.E. and N. Wexler (1970) An Investigation of Selected Factors in the Affective Domains of High Risk Black and Regular College Freshmen. American Educational Research Association, Washington, D. C. 16p.

A semantic differential based on three factors: evaluation, potency, and activity was administered to 278 freshmen in 11 communications sections at a state college to study attitudes toward selected college related stimuli (black students, professors, Glassboro State College, Afro-American courses, white students, me-myself). Students were classified by sex and whether they were regular students or high-risk students. Conceptual differences were found between high-risk and regular students. The rebirth of pride in being black was reflected by the high-risk students on all factors. White males tended to be more negative in their feelings toward blacks than white females as far as evaluation was concerned. Blacks had significantly lower acceptance of whites than did whites of blacks on evaluation. Blacks tended to be more racially sensitive than whites. The evaluation factor was more sensitive to racial identification than were the two other factors. (Author/AF) (ED 045017)

Karni, K. R. and F. Usted (1970) "Attitudes, Self-Concepts, and the Student in Medical Technology". American Journal of Medical Technology 36:491-507.

Sophomore and senior students of medical technology at three universities were surveyed over a two-year period to assess their attitudes concerning education in medical tehcnology, personal involvement with laboratory work, and medical technology as a profession. Both groups responded in a positive manner to their over-all education, but differed in their reasons for satisfaction or dissatisfaction with certain parts of it. The students also acknowledged that although they understood their own importance in the medical effort, neither the rest of the hospital staff nor the layman recognized that importance. Other findings of interest were -- more sophomores than seniors were confident of choosing a good job; an important adjustment the medical technology student had to make is the dramatic change between his three years in a academic setting and his final year in the clinical laboratory; clinical experiences confront the student with a new set of experiences which he may or may not have been prepared to cope with; and the apparent "identity crisis" concerning the profession. (Author Abstract Modified)

Kim, K. H. (1969) "The Social Context of Occupational and Educational Mobility Aspirations of Negro Adolescents". Dissertation Abstracts 29:4564-A.

Two interrelated dimensions of study are applied to the subject: (1) the formulation of adequate theoretical constructs to explain mobility aspirations of the Negro adolescent in a changing cultural and social context and (2) empirically descriptive materials of Negro youth derived from an analysis of schedule data obtained through personal interview.

Pertinent aspects of social stratification theory deal particularly with social contexts such as the structural and functional aspects of family and the influence of peer groups and schools. Reference group theory views the American Negro as a marginal man because he is in the process of assimilation to the larger social and cultural norms and values. The mechanism of anticipatory socialization is a major process through which the individual adopts mobility aspirations from higher status groups. As social and psychological distances are reduced, Negroes tend to seek identity and membership in the higher status non-Negro groups. Consequences of these changes in the pattern of Negro and white group interrelationships result in higher mobility aspirations among the members of the Negro group.

From the empirical standpoint, the sample of the study comprised 187 male and 159 female Negro high school seniors in Baltimore. Approximately 85 percent of the sample comes from manual-labor backgrounds, only 11 percent of the fathers and 15 percent of the mother having had some college education.

The variables related to the student's aspiration, to family background, parents' aspirations, and the perceived chances for success of the students, were subjected to chi-square tests of significance.

Among the major tests of relationships showing significance are the following: (1) educational aspirations of the male students and parents' educational backgrounds, (2) parents' occupational aspirations for the male students and the parents' occupational backgrounds, (3) students' occupational and educational aspirations and parents aspirations for the students, (4) male students' occupational aspirations and those of their friends, and (5) students' educational aspirations and those of their friends.

The following are among the major descriptive and interpretive conclusions: (1) approximately 50 percent of the male and 83 percent of the female students aspire to semi-professional and professional occupations, (2) approximately 73 percent of the male and 81 percent of the female students aspire to some college education, (3) the parents' aspirations for the daughters are higher than for the sons, (4) students' mobility aspirations are higher than for parents' aspirations for the students, (5) approximately 72 percent of the students consider the families the most important sources of influence on their aspirations, (6) female students tend to be influenced by their families to a greater extent than male students, presumably due to the prevalence of the one-parent families among the low class Negro families, (7) families are used more often as negative rather than positive reference groups presumably due to the lack of "models of association," (8) the majority of the Negro high school seniors share the American Dream regardless of their backgrounds, (9) more female than male students perceive of their chances for achieving their aspirational goals as good, and (10) Negro youth are aware that to seek mobility through education and the professions is realistic while it is quite unrealistic to seek success through business outside the Negro community or through corporate hierarchies.

The major hypothesis of the study is that there exists uniform values pertaining to occupational and educational aspirations throughout society and that the differences between the groups arise because the characteristic life situation of each group makes success or mobility relatively attainable or unattainable, or relatively comprehensible or incomprehensible.
(Taken from Dissertation Abstracts)

Kuvlesky, W. P. and V. M. Patella (1971) "Degree of Ethnicity and Aspirations for Upward Social Mobility Among Mexican American Youth". *Journal of Vocational Behavior* 1:231-244.

Hypothesized that degree of identification with the Mexican American subculture among adolescents is inversely related to desire for upward social mobility. Ss were 500 Mexican American high school sophomores from southern Texas. Ethnic identification was indicated by an index of the use of Spanish in a variety of situations. Aspiration for intergenerational mobility was measured through cross-classification of the respondents' occupational aspirations with the job of main provider in their family. Comparative analysis of upwardly mobile and nonmobile respondents, by ethnicity, socioeconomic status, and sex, and comparison of ethnicity scores, by degree of mobility projected for each socioeconomic status type, did not support the hypothesis. (PASAR)

Lao, R. C. (1970) "Internal-External Control and Competent and Innovative Behavior Among Negro College Students". *Journal of Personality and Social Psychology* 14:263-270.

A distinction was made between beliefs concerning internal-external control at the personal and ideological levels. Rationale was given to show that these should operate differently from each other and relate to different variables. The following hypotheses were derived: (1) An "internal" belief in personal control is positively related to general competence; (2) an "external" belief in ideology which blames the system for Negro disadvantages is positively related to innovative behavior; (2a) a strong belief that discrimination may be modified further enhances innovativeness among system blamers. Data on 1,493 male Negro college students in the Deep South supported the two main hypotheses and also showed that the personal and ideological control variables are independent of each other. The subhypothesis (2a) was rejected. Much has been said and several studies have been completed on motivation as a factor for predicting success. The author's data does not imply nor support the rather common assumption in the literature that it is good to believe that internal forces are generally important determinants of success in this culture. On the contrary, the results presented in this paper support and add meaning to the exception of this common assumption. It seems very clear that it is not always desirable for Negro youth to believe in internal control, particularly when the sense of control deals with success and failure for Negroes themselves. Instead Negro students who can focus on system obstacles seem to have a more realistic assessment of the situation, to have a higher level sophistication in distinguishing between cultural and personal limitations, and thus are more likely to choose innovative roles in the areas of occupation as well as social action. The author concludes by saying that further research along the lines of educational and training programs dealing with the distinction between cultural and personal limitations needs to be initiated if positive action, rather than further frustration, is to follow. (Author Abstract Modified)

Lewis, L. (1970) Culture and Social Interaction in the Classroom; An Ethnographic Report. California University, Berkeley, Language and Behavior Research Lab. 39p.

The basic question underlying the research reported in this paper is: to what extent does a difference between a child's cultural background and that of his teacher and his scholastic milieu affect his classroom attitude and performance? Questions arising from this basic one are: (1) What features of a child's cultural background directly or indirectly affect his behavior in the classroom? (2) What is the affect of cultural differences (a) between the teacher and the child? (b) on the teacher's perception of the child? (c) on the child's perception of the teacher and of the learning process and himself? (3) How effective are the usual techniques of evaluation used by teachers in measuring learning capacity and skill, cross culturally? The report focuses on the education of Afro-American children in the Berkeley (California) Public Schools, but the author hopes that the study will be useful in isolating some of the "universals" of cultural contact in the classroom. Individual sections (1) present an historical outline of black culture and education in the public schools; (2) discuss black culture and social interaction in the classroom; (3) discuss the performances of teachers whose classrooms were visited; (4) present transcriptions of taped instances of actual teacher-pupil interaction. The author stresses the preliminary nature of this work. (Author/FWB) (ED 044682)

Lind, A. I. (1970) "An Exploratory Study of Predictive Factors for Success in the Clinical Affiliation Experience". American Journal of Occupational Therapy 24:222-26.

This study examines various student selection instruments and other variables such as grade point averages to determine their use in predicting success in occupational therapy clinical affiliations. Two study groups from the University of North Dakota are identified. One consisted of 25 female graduates who were or had been employed as occupational therapists; the other consisted of 50 undergraduates (46 females; 4 males). The study was designed to compute a multiple regression equation to predict success in affiliations in general medicine and surgery, psychiatry, physical disabilities and pediatrics; to predict success in the overall clinical program and to determine whether there were any differences in predictors for males and females. The instruments used in the study were (1) the Allport-Vernon-Lindzey Study of Values; (2) the Edwards Personal Preference Schedule and (3) the Strong Vocational Interest Blank. Descriptions of the instruments are provided. Multiple regression equations were significant at the .05 level. The author concludes that since correlations were low they have limited predictive utility. In general, grade point averages were the best predictors; although in some areas their predictive utility was limited. The overall conclusion is that further research is needed to develop sensitive predictive performance measures.

Lobene, R. R. et al. (1971) "Social Attitudes of Dental Hygiene Students. Part I: Backgrounds". Journal of the American Dental Hygiene Association 45:164-8.

This study described the social class backgrounds and some selected attitudes of dental hygienists in a large urban eastern university. The study subjects were divided into five social classes on the basis of Hollingshead's two factor index of social position based on their fathers' education and occupation. The study showed that the desire to help people, the availability of job opportunities and professional satisfaction were ranked as first, second and third reasons for entering the dental hygiene program. Members of the study group were also questioned regarding their feelings about race, education, religion and language of their future patients in order to assess whether any of these factors would affect the dental hygienist's judgment of a patient as a person. The findings of this study also showed differences in students' social class backgrounds and their attitudes toward the poor. Respondents agreed that the most important problems facing the dental profession are a need for trained dental hygienists and dental assistants and their inability to deliver good dental hygiene care to the poor, aged and the other disadvantaged people.

Lobene R. R. et al. (1971) "Social Attitudes of Dental Hygiene Students. Part II: Professional Concerns". Journal of the American Dental Hygiene Association 45:237-41.

The persistence of poverty among one-fifth of the American population, with increasing numbers of people with low incomes and inadequate savings, has placed greater demands on the health professions to provide high quality and compassionate health care for all citizens. This report explores the attitudes of dental hygiene students toward community dental health problems, the needs of deprived groups and their willingness to treat the poor. The data indicate that the students who are concerned with the poor, the aged and the disadvantaged are most likely to practice their profession in small cities; in contrast to their colleagues, who will locate in towns and rural areas. The poverty oriented hygienists are more likely to volunteer their services, while their colleagues who are concerned with manpower shortage are more likely to contact the State Department of Health. Data indicate that students who were concerned with the poor, the aged and the disadvantaged were more likely to work in poor communities and in neighborhood health centers.

Lobene, R.R. et al. (1972) "The Relationship Between Social Class, Stress-Anxiety Responses, Achievement, and Professional Attitudes of Dental Hygiene Students". Journal of the American Dental Hygiene Association 46:113-7.

Social class and academic achievement of first year students in a dental hygiene training program were studied in relation to stress-anxiety responses and the acquisition of professional attitudes. The sample consisted of 108 students who attended a large private university-based school for dental hygienists. It is hypothesized that dental hygiene students from families of upper class backgrounds have lower stress-anxiety responses than dental hygiene students from families of middle and lower class backgrounds and that professional attitude scores of those students from upper class backgrounds will not differ significantly from those of middle and lower class backgrounds. Hollingshead's Two Factor Index of Social Position, Taylor's Personality Scale of of Manifest Anxiety and Roskinki's Student Attitude Inventory were the protocols used for analysis and measurements of stress-anxiety and professional attitudes. Conclusions drawn indicated that social class was not significantly related to stress-anxiety; there was no relationship between subjects' academic achievements and their social class background; academic achievement was related in part to stress-anxiety responses and to professional attitudes. Further study of additional student populations is recommended since all the subjects came from predominantly white, urban settings.

Office of Education (DHEW), Washington, D.C. (1966) Equality of Educational Opportunity--Summary. Catalog NO-FS-5.238-38000, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. 39p.

This summary briefly discusses the findings reported in "Equality of Educational Opportunity" (ED 012 275), a national survey of the education of minority group children ordered in the Civil Rights Act of 1964. Generally following the format of the original report, the summary details the degree of segregation of minority group pupils and teachers in the schools and the relationship between students' achievement, as measured by achievement tests, and the kinds of schools they attend. The school characteristics which are assessed include curriculums, school facilities such as textbooks, laboratories, and libraries, such academic practices as testing for aptitude and achievement, and the personal, social, and academic characteristics of teachers and students. Also discussed are the academic characteristics and racial preferences of future teachers, Negro higher education, school enrollment and dropouts among white and Negro students, and the effects of integration on achievement. Several case studies of school integration are presented. Tabulated data are reported throughout the summary. This document is also available as catalog NO-FS-5.238-38000 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, for $0.30. (LB) (ED 015953)

Olsen, H. D. (1970) "A Comparison of Academic Self-Concept, Significant Others, and Academic Significant Others of Black and White Pre-College Students." Child Study Journal 1:28-32.

Tested a sample of 133 black and 16 white undergraduates enrolled in an educational opportunity program (EOP). To measure self-concept-of-ability (SCA), i.e., Ss' perception of his own ability to perform in an academic setting, an 8-item multiple choice questionnaire was utilized. It was found that black and white EOP Ss perceived themselves as slightly above the average student in SCA, while black EOP Ss perceived themselves as equal or superior to their white counterparts. Black and white EOP Ss generally viewed parents as being "significant others" and "academic significant others." (PASAR)

Olsen, H. D. (1971) The Effect of Compensatory Education Upon the Self-Concept-of Academic Ability, Significant Others, and Academic Significant Others of Black and White Pre-College Students. Paper presented at the Annual Meeting of the American Educational Research Association, New York, N.Y. 9p.

This research utilizes Brookover's Social-Psychological Theory of Learning by evaluating the level and/or change in self-concept-of-academic ability, significant others, and academic significant others of 121 black and white compensatory education students. As a result of exposure to compensatory education there was a significant positive change in self-concept-of-academic ability for compensatory education students in general, as well as for blacks and whites. Males and females also had a significant positive change. The students identified parents, teachers, relatives, friends, offspring, spouse, and themselves as significant and academic significant others. There were significant changes in offspring, friends, teachers, spouse, and themselves as significant others, and themselves, spouse, offspring, and relatives as academic significant others as a result of compensatory education. (Author) (ED 047075)

Sain, L. F. (1966) "Occupational Preferences and Expectations of Negro Students Attending a High School Located in a Lower Socio-Economic Area". Dissertation Abstracts 27(4-A): 966.

Statement of the Problem

The study was an investigation of the occupational preferences and occupational expectations of Negro high school students attending a high school located in a lower socio-economic area of the City of Detroit. One major objective of the study was to determine if there was any difference between the occupational preferences and occupational expectations of these students. In addition, the influence of additional factors in the occupational choices of these students were investigated--the role of parents, friends, and the school.

Sources of Data and Methodology

The major source of data was the questionnaire schedule. Methodological inquiry consisted of tabular and content analyses of the 68 item questionnaire schedule which was administered to the 258 students which comprised the 12.5 per cent proportionate stratified sample of the Negro students in attendance at this high school at the time of the study.

In addition, from the school's cumulative records of each student data was obtained regarding the curriculum pattern, academic achievement record, and the total academic aptitude scores, based on the 10B School and College Ability tests. The results of the investigation yielded data which is presented in 31 tables.

Summary of the Findings

The major findings and relevant data were presented as sectional summaries in Chapter IV (Results of the Investigation) and Chapter V (Summary, Conclusions and Implications).

1. The occupational expectations for the sample group are largely the same as are their occupational preferences.

2. The student's occupational preferences and expectations have a high degree of unrealism based on their indicated academic aptitude and their academic achievement records.

3. The students are vocationally immature based on the perceptions and knowledge they have of several aspects of occupational information relating to their occupational choices.

4. The majority of the parents of these students are employed in unskilled or semi-skilled occupations and the students perceive their parents as having the same aspirations for the students as the students have for themselves.

5. It is indicated that the expressed occupational choices of the students have been made without much basis of occupational exploration or reality testing.

6. The students perceive the school as being a minor source of occupational information, and parents and relatives as being more influential in their choice of an occupation than teachers and counselors.

The recommendations were selectively summarized as follows:

1. The school should strengthen its guidance program to more effectively assist these students in educational and vocational planning that will assist the students to become more vocationally mature and make wise occupational choices.

2. A program of vocational development should begin in the elementary grades and be articulated with the junior and senior high schools in the constellation.

3. Opportunities should be provided for these students to have contact and interact with Negroes who are employed in a variety of occupations, and at different levels of skills.

4. Classroom teachers should integrate guidance with the curricula offerings and relate the classwork to the vocational development of these students.

5. Parents, as well as teachers and counselors, should become more aware of the changing world of work and the occupational opportunities now available to Negroes.

6. The curriculum offerings and program should be constantly reexamined to determine if the objectives of educating these students is being met. (Taken from Dissertation Abstracts)

Smith, G. M. (1969) "Personality Correlates of Academic Performance in Three Dissimilar Populations". Proceedings of the 77th Annual Convention of the American Psychological Association 4(pt. 1):303-304.

42 personality variables, derived from peer ratings, were factor analyzed and studied in relation to GPA (using univariate and multivariate procedures) in a sample of 1022 Spanish-speaking high school students and 2 English-speaking samples (348 undergraduates and 798 student nurses). Factor analytic structure was stable across populations. The predictive validity of variables belonging to the factor called "strength of character" surpassed that of most other variables. The relations between personality and academic performance were highly consistent across the 3 dissimilar populations especially for the "strength of character" variables. (PASAR)

Stein, F. (1972) "Community Rehabilitation of Disadvantaged Youth". American Journal of Occupational Therapy 26:277-83.

Studies in social deviance have shown a strong relationship between family disorganization in childhood and acting out behavior during adolescence. Traditional approaches for reforming the socially disadvantaged delinquent through the criminal justice system have led to continued recidivism. In order to explore the personality and cognitive characteristics of socially disadvantaged youth the results of a clinical study of thirty-one teen-aged boys living in a residential halfway house for socially disturbed youth were examined. Prototypes for changing the life styles of socially disadvantaged youth are presented, and the implications for occupational therapists as interventive treatment agents are outlined. (Author Abstract)

Temp, G. (1971) "Validity of the SAT for Blacks and Whites in Thirteen Integrated Institutions". Journal of Educational Measurement 8:245-251.

Differential prediction for black and white students was empirically investigated at 13 institutions by comparison of regression planes. The possibility that prediction procedures that are appropriate for white (majority) students would underpredict the performance of black (minority) students is stressed. Data tend to support, among others, the following generalizations: (a) a single regression plane cannot be used to predict freshman GPA for both blacks and whites in 10 of the 13 institutions studied. Nevertheless, (b) if prediction of GPA from scholastic achievement test scores is based upon prediction equations suitable for majority students, then black students, as a group, are predicted to do about as well as (or better than) they actually do. But, (c) the multiple regression prediction for blacks in 12 of the 13 institutions was lower in magnitude than for whites and was nonsignificant in 6 of the situations studied. (PASAR)

Thomas, C. L. and J. C. Stanley (1969) "Effectiveness of High School Grades For Predicting College Grades of Black Students: A Review and Discussion". Journal of Educational Measurement 6:203-215.

The purpose of this study was to reexamine the value of high school grades "relative to standardized test scores) for predicting college grades of black students. Data from previous studies and from a predominantly black university were analyzed. Results tend to indicate that high school grades do not consistently make the greatest contribution in predicting college grades of black students, perhaps particularly of men, whereas they do for whites. Unreliability of grade reporting, invalidity of grades in high school, restriction in range due to selection processes, and intergroup differences in personality characteristics were advanced to explain this phenomenon. Further research on this problem was suggested in view of the fact that many selective institutions are relying heavily on high school grades in their selection of black students. (Author Abstract)

Tuttle, T. C. (1970) Actual and Perceived Beliefs of Black and White Students. Paper Presented at the Annual Meeting of the American Educational Research Association, Minneapolis, Minnesota. 16p.

In this study 50 black students from an all black liberal arts college in North Carolina and 48 white students from a branch of the University of North Carolina were each asked to respond twice to 30 belief items--once according to the way he felt they should be ranked, and then "as he felt someone of the other race, black or white, would respond." The belief items fell into five categories of social concerns: poverty, race, welfare, employment, and social conflict. This was administered along with a scale of 12 terminal values developed by Rokeach. Blacks ranked freedom first and equality second; whites ranked freedom and equality fifth. Blacks ranked a comfortable life fourth, and whites twelfth. The greatest differences between groups existed in the items dealing with employment, race, and poverty, but a far greater difference emerged in the whites' views of blacks and the blacks' view of whites. Significant differences for all five attitudes became evident when the perceived attitudes of the races were compared. Data also showed a significant relationship between values and beliefs, i.e., those who ranked freedom and equality high had more liberal scores than those who ranked freedom high and equality low (Rokeach Two-Dimensional Model was used). Tables with test data and a sample of the measuring instrument are appended. Not available in hard copy due to marginal legibility of original document. (KG) (ED 040222)

Watley, D.J. (1971) "Black and Nonblack Youth: Does Marriage Hinder College Attendance?" National Merit Scholarship Corporation, Research Reports Vol. 7(5), 28p.

Investigated the effect of marriage on the college attendance behavior of a total of 28,800 National Merit Scholarship Qualifying Test participants. Ss composed 72 subsamples formed on the basis of race (black or nonblack), sex, ability level, and geographical region of residence. While only 64% of nonblacks and 52% of blacks returned a 1-page questionnaire used in the study, a number of tentative conclusions were considered justified. Marriage appeared to be a more important factor in the college attendance behavior of nonblack than black males. The marital status of a woman of either race was especially significant as a determinant of college attendance: a married women, regardless of color, was even less likely to attend than her male counterpart. Marriage also affected the type of college entered, the grades received, and whether the freshman year was completed. (PASAR)

Williams, J.G. and J. J. Stack (1972) "Internal-External Control as Situational Variable in Determining Information Seeking by Negro Students". Journal of Consulting and Clinical Psychology 39:187-193.

Notes that Negroes have been reported to hold an external locus of control and to be relatively nonachievement-oriented. Sixty Negro undergraduates were told that they were engaged in a diadic experiment aimed either at changing attitudes or at "interaction." Ss were randomly assigned to 3 groups with different levels of success expectancy and task reinforcement value. Number of questions asked about the experiment and the time spent examining each of 3 classes of magazine articles were used as measures of information-seeking behavior. Data support the general hypotheses that internals more actively than externals seek information which they perceive as useful in environment control and that Negroes behave in an internal, achievement-oriented manner under conditions of appropriate expectancies and reinforcement values. (19 ref.) (PASAR)

Willis, C. T. and F. J. Goldberg (1969) Correlates of Attitudes Toward Black Militancy Among Black College Students. Research Report No. 13. Atlanta University, Georgia; Morehouse College, Atlanta, Georgia; Southeastern Psychological Association, Knoxville, Tennessee. 12p.

A 23-item militancy scale was administered to 100 black college students. Background information and Rokeach's Terminal Value Scale were also given. Using a multiple regression analysis, several variables emerged as good predictors of militancy for the sample. The best single predictor is racial designation, militants preferring to call themselves "Black," non-militants preferred Negro. The second best predictor is the extent to which "salvation" is valued. On an 18-item scale, militants valued salvation 14th while non-militants ranked it 3rd. Occupational preference is the third best predictor, students preferring science or business being less militant. A fourth predictor is father's education, with the father of militants tending to be better educated. Other predictors were rankings on values of national security, a comfortable life, social recognition, and accomplishment. These were all valued more highly by militants. Both groups valued freedom and equality above any other values presented in the Rokeach Value Scale. (Author/KJ) (ED 035041)

STUDENT QUESTIONNAIRE (FINAL FORM)

01. Name: ______________________________
(First) (M.I.) (Last)

02. Present mailing address:

____

____

____

03. Present phone number: ______________

04. Name and location of institution presently attending.

____
Name
____
City State

05. Sex: ( ) Male ( ) Female

06. In what year were you born?
19___

07. Which of these best applies to you?
( ) Black American
( ) Mexican American
( ) Puerto Rican
( ) Latin American
( ) Cuban American
( ) Indian American
( ) Other: Please specify____________

08. Marital status:
( ) Single
( ) Married
( ) Separated
( ) Divorced
( ) Widowed
( ) Other

09. Including yourself, how many dependents are you now supporting?
____

10. How well did your high school prepare you for your health career program?
( ) Adequately
( ) Inadequately
( ) Poor
( ) Does not apply

11. How many months is the program in which you are enrolled?
( ) 0-6
( ) 7-12
( ) 13-18
( ) 19-24
( ) Over 24

12. What percentage of your program have you completed up to now?
( ) Under 25%
( ) 25-50%
( ) 51-75%
( ) Over 75%

13. What is your present enrollment status?
( ) Part-time
( ) Full-time

14. Indicate how well you're doing in your program.
( ) High Pass
( ) Pass
( ) Low Pass
( ) Fail
( ) Don't know yet

15. (a) Are you presently working in any paying job?
( ) Yes, training related
( ) Yes, non-training related
( ) No
(b) If yes, how many hours per week?
____

16. a. How many instructors (clinical and classroom) do you come in contract with during a typical week?__________

b. How many of the above instructors are:
Black American _______
Spanish American______
Indian American_______

17. This school year, who is paying for your health career program?
Check all that apply
( ) I am
( ) My family
( ) My spouse
( ) V.A. program (G.I. Bill)
( ) Financial aid package from school
( ) A state program
( ) Other:__________________________
specify

18. Which one of the following best describes the allied health program in which you are now enrolled?
( ) Dental Assistant
( ) Dental Hygienist
( ) Dental Laboratory Technician
( ) Dietary Technician
( ) Dietitian
( ) Inhalation Therapy Technician
( ) Medical Laboratory Technician
( ) Medical Technologist
( ) Medical Records Librarian (Medical Record Administration)
( ) Medical Records Technician
( ) Occupational Therapist
( ) Occupational Therapy Assistant
( ) Ophthalmic Assistant
( ) Optometric Technician
( ) Optometric Technologist
( ) Physical Therapist
( ) Radiologic Technologist
( ) X-Ray Technician
( ) Sanitarian
( ) Sanitarian Technician
( ) Other__________________________
specify

19. How did you find out about allied health careers?
Check the 3 most important
( ) Parents/Relatives
( ) Classmates
( ) Friends
( ) Teachers
( ) Counselors
( ) Professionals in field
( ) School program
( ) Part-time or summer work
( ) Library
( ) Advertising
( ) Special community projec
____
specify
( ) Other:__________________
specify

20. Have you had to take any special course(s)
a. As a condition to your being admitted to your program.
( ) Yes ( ) No

b. As part of your program
( ) Yes ( ) No

21. (a) How many years of educa
tion has your father completed?
(Circle one)
1 2 3 4 5 6 7 8
10 11 12 13 14 15
( ) Do not know

(b) Your mother? (Circle o
1 2 3 4 5 6 7 8
10 11 12 13 14 15
( ) Do not know

22. Each of the items listed below is a task that has to be completed in applying to schools for admittance. Check how difficult each task was for you to do.

	Not at all Difficult	A little Difficult	Somewhat Difficult	Very Difficult	Extremely Difficult
Getting catalogs Applications	( )	( )	( )	( )	( )
Getting letters of recommendation	( )	( )	( )	( )	( )
Being interviewed	( )	( )	( )	( )	( )
Getting enough money for application fee	( )	( )	( )	( )	( )
Taking entrance tests	( )	( )	( )	( )	( )
Filling out application forms	( )	( )	( )	( )	( )
Writing essay required by applications	( )	( )	( )	( )	( )
Filling out financial aid forms	( )	( )	( )	( )	( )
Other:________________ specify	( )	( )	( )	( )	( )

3. Many factors influence a person's DECISION TO ENTER a career in allied health. Indicate the influence of each of the factors listed below on your decision to enter an allied health field. Please read the answer categories before answering.

PLEASE NOTE RESPONSE CATEGORIES HAVE CHANGED

	Strong Negative Influence	Weak Negative Influence	No Influence	Weak Positive Influence	Strong Positive Influence
Small number of minorities in field	( )	( )	( )	( )	( )
Ease of getting a job in allied health field	( )	( )	( )	( )	( )
Friends also interested in field	( )	( )	( )	( )	( )
Advice from a professional in the field	( )	( )	( )	( )	( )
Job security	( )	( )	( )	( )	( )
Image of allied health field	( )	( )	( )	( )	( )
Salaries earned by allied health professionals	( )	( )	( )	( )	( )
Advice from counselors	( )	( )	( )	( )	( )
Other:________________ specify	( )	( )	( )	( )	( )

24. Many factors influence the selection of school(s) or training institution(s). For each of the terms below, indicate its influence on your DECISION TO APPLY to the specific school(s) that you did.

	Strong Negative Influence	Weak Negative Influence	No Influence	Weak Positive Influence	Strong Positive Influence
Open enrollment policy	( )	( )	( )	( )	( )
Special programs for minorities	( )	( )	( )	( )	( )
Accreditation of school programs	( )	( )	( )	( )	( )
Type of degree or certificate offered	( )	( )	( )	( )	( )
Cost of program	( )	( )	( )	( )	( )
Number of minorities already in school	( )	( )	( )	( )	( )
Grades/class standing required for entrance	( )	( )	( )	( )	( )
Length of program	( )	( )	( )	( )	( )
Ability to live at home while attending school	( )	( )	( )	( )	( )
Image of school	( )	( )	( )	( )	( )
Friends also applied	( )	( )	( )	( )	( )
Financial aid available	( )	( )	( )	( )	( )
Advice from counselors	( )	( )	( )	( )	( )
Advice from someone in the field	( )	( )	( )	( )	( )
Advice from teachers	( )	( )	( )	( )	( )
Other: ____________________ specify	( )	( )	( )	( )	( )

PLEASE NOTE RESPONSE CATEGORIES HAVE CHANGED

5. Listed below are a number of problems, barriers or situations that have caused some people to drop out of training. For each of the items, indicate how difficult a problem it is to YOUR STAYING IN SCHOOL.

	Not at all Difficult	A little Difficult	Somewhat Difficult	Very Difficult	Extremely Difficult
Financial problems	( )	( )	( )	( )	( )
Child Care Problems	( )	( )	( )	( )	( )
Grades	( )	( )	( )	( )	( )
Reactions of teachers to me	( )	( )	( )	( )	( )
Reactions of spouse	( )	( )	( )	( )	( )
Social life	( )	( )	( )	( )	( )
Concerned about passing licensing exam	( )	( )	( )	( )	( )
School does not meet my expectations	( )	( )	( )	( )	( )
Acceptance by classmates	( )	( )	( )	( )	( )
Academic preparation	( )	( )	( )	( )	( )
Language problems	( )	( )	( )	( )	( )
Getting along with people in a clinical setting	( )	( )	( )	( )	( )
Lack of help with non-academic problems	( )	( )	( )	( )	( )
Lack of help with academic problems	( )	( )	( )	( )	( )
Other:__________ specify	( )	( )	( )	( )	( )

26. For each statement below, decide how much you agree or disagree with it. Put a check under the column of your choice.

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
My present career choice gives me a sense of status.	( )	( )	( )	( )	( )
My school accepts minority students regardless of academic qualification.	( )	( )	( )	( )	( )
Instructors usually tell me when I am doing a poor job.	( )	( )	( )	( )	( )
Academic support should not be restricted to minority students.	( )	( )	( )	( )	( )
Counselors could do a better job of assisting students if they had more information on available financial resources.	( )	( )	( )	( )	( )
My culture has caused problems for me in school.	( )	( )	( )	( )	( )
Teachers generally don't think students can do as well as they think they can do.	( )	( )	( )	( )	( )
Admissions procedures in my institution are designed to keep the number of minority entrants at a minimum.	( )	( )	( )	( )	( )

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
Special academic assistance programs should not be restricted to minority students.	( )	( )	( )	( )	( )
My instructors have encouraged me to stay in school.	( )	( )	( )	( )	( )
Housing assignments in school facilities are made on a racial basis.	( )	( )	( )	( )	( )
My career choice will allow me to get a feeling of doing something worthwhile.	( )	( )	( )	( )	( )
My institutions discriminate against minority group members in administering financial aid.	( )	( )	( )	( )	( )
Generally speaking, instructors encourage students to stay in school.	( )	( )	( )	( )	( )
Certain jobs in my field are reserved for whites.	( )	( )	( )	( )	( )
Discrimination by faculty contributes to high dropout rates among minority students.	( )	( )	( )	( )	( )

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
My instructors understand my culture.	( )	( )	( )	( )	( )
Generally speaking, instructors have taken personal interest in my work.	( )	( )	( )	( )	( )
Schools assume that all minority group students need special academic assistance programs.	( )	( )	( )	( )	( )
Instructors usually tell students when they are doing a poor job.	( )	( )	( )	( )	( )
Minority group individuals have less chance of being successful regardless of their education.	( )	( )	( )	( )	( )
Teachers gererally don't think I can do as well as I think I can do.	( )	( )	( )	( )	( )
My classmates understand my culture.	( )	( )	( )	( )	( )

27. Rank the following potential barriers to obtaining an Allied Health education. Rank in order of importance, from 1 (highest) to 10 (lowest).

______Racial discrimination

______Cultural differences

______Information concerning allied health

______Geographic location

______Financial status

______Length of program

______Admissions criteria and procedures

______Not knowing anyone in the field

______Academic preparation

______Student-faculty relationship

Sample Institutional Questionnaire (*Final Form*)

(Address of local Contractor)

Name of Institution____

Mailing Address:____

Name of Person Completing Form:______________________________ Title:__________________

Telephone Number:______________________
(area code)

Purpose: These statistics are being compiled by the ______________________________ to ASAHP, Health Resources Administration, Bureau of Health Resources Development Division of Allied Health, to identify barriers to the attainment of equal representation in allied health education programs. Barriers are identified as attitudes, constraints, or practices which act to prevent educational achievement of the minority population. Minority includes Black, Indian and Spanish Americans.

Directions: We are interested in your 1973-74 statistics. Please fill in as many categories as apply to your institution. Please mail in the enclosed self addressed, stamped envelope no later than__________________. If you need additional information, please call__________________collect at__________________.

INSTITUTION ENROLLMENT		ALLIED HEALTH ENROLLMENT	
Total Students	Total Minority Students	Total Students	Total Minority Students

Total minority students in Allied Health entered by school year 73-74			
Fresh.	Soph.	Jr.	Sr.

Number of Allied Health Programs

ALLIED HEALTH STUDENTS

Number Minority Students accepted (73-74)	Number Minority Students admitted (73-74)	Number Minority Students withdrawn (73-74)

ALLIED HEALTH FACULTY

Total Faculty		Total Minority Faculty	
Academic	Clinical	Academic	Clinical

STUDENT ENROLLMENT ACCORDING TO PROGRAM AND ETHNIC BACKGROUND

Total (T), Black (B), American Indian (I), and Spanish American (S)

Dental Hygenist				Dental Lab Technican				Dental Ass't				Dietition				Dietition Technician				Inhalation Therapist Techn				Medical Technology				Medical Lab. Tech				Medical Record Tech.				Med. Rec. Librarian			
T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S

Occup. Therapy				Occup. Ther. Ass't				Optometric Technol.				Optometric Technician				Ophtalmic				Physical Therapist				Radiology Technol.				Sanitarian				Sanitarian Technician				X-Ray Techn.			
T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S	T	B	I	S

SUMMARY OF RESPONSES FROM PILOT GROUP

STUDENT QUESTIONNAIRE

. Name: ______________________
(First) (M.I.) (Last)

. Present mailing address:

____

____

____

3. Present phone number: ________

. Name and location of institution presently attending.
4 Delaware Valley Academy
3 National School of Health Tech.
1 U. Penn Name
1 Temple - Dentistry
(City) (State)

5. Sex: (2) Male (7) Female

. In what year were you born?
19 average 1950 + 1 in 1926

. Which of these best applies to you?
(7) Black American
( ) Mexican American
(1) Puerto Rican
( ) Latin American
( ) Cuban American
( ) Indian American
(1) Other: Please specify Nigerian

8. Marital status:
(6) Single
(1) Married
( ) Separated
(2) Divorced
( ) Widowed
( ) Other

. Including yourself, how many dependents are you now supporting?
(3) None
(1) One
(1) Two
(1) Three
(3) Four

10. How well did your high school prepare you for your health career program?
(4) Adequately
( ) Inadequately
( ) Poor
(5) Does not apply

11. How many months is the program in which you are enrolled?
(3) 0- 6
(5) 7-12
( ) 13-18
( ) 19-24
(1) Over 24

12. What percentage of your program have you completed up to now?
(2) Under 25%
(5) 25-50%
( ) 51-75%
(2) Over 75%

13. What is your present enrollment status?
(2) Part-time
(7) Full-time

14. Indicate how well you're doing in your program.
(1) High pass
(8) Pass
( ) Low Pass
( ) Fail

15. (a) Are you presently working in any paying job?
( ) Yes, training related
(4) Yes, non-training related
(5) No
(b) If yes, how many hours per week?
(72)-(48)-(24)-(blank)

16. How many instructors (clinical and classroom) do you come in contact with during a typical week? (2) One
(5) Two
(2) Six

17. How many of the above are:
Black American 2
Spanish American 2
Indian American 0
Other minorities 0
Mixed 1

18. This school year, who is paying for your health career program?
Check all that apply
(5) I am
(1) My family
( ) My spouse
(1) V.A. program (G.I.Bill)
( ) Financial aid package from school
(1) A state program
(1) Other: Bureau of Vocational Rehabilitation
specify

19. Which one of the following best describes the allied health program in which you are now enrolled?
(2) Dental Assistant
(1) Dental Hygienist
(3) Dental Laboratory Technician
( ) Dietary Technician
( ) Dietitian
( ) Inhalation Therapy Technician
(1) Medical Laboratory Technician
( ) Medical Records Librarian (Medical Record Administration)
( ) Medical Records Technician
(1) Medical Technologist
( ) Occupational Therapist
( ) Occupational Therapy Assistant
( ) Ophthalmic Assistant
( ) Optometric Technician
( ) Optometric Technologist
( ) Physical Therapist
(1) Radiologic Technologist
( ) Sanitarian
( ) Sanitarian Technician
( ) X-Ray Technician
( ) Other: __________
specify

20. How did you find out about allied health careers?
Check the 3 most importan
(1) Parents/Relatives
(2) Classmates
(1) Friends
( ) Teachers
( ) Counselors
(2) Professionals in fiel
(1) School program
( ) Part-time or summer wo
( ) Library
(8) Advertising
( ) Special community projects:
____
specify
( ) Other: __________
specify

21. Have you had to take any special course(s)
a. As a condition to your being admitted to your program.
( ) Yes (9) No

b. As part of your progra
( ) Yes (9) No

22. (a) How many years of education has your father completed?
(Circle one) (1)
1 2 3 4 5 6 7 8 9 10 (2)
11 12 13 14 15 16+ (2)
(3) Do not know (1)
(b) Your mother? (Circle one
1 2 3 4 5 6 7 8 9 10 (1)
11 12 13 14 15 16+ (3)
(1)
(c) (4) Do not know

23. Each of the items listed below is a task that has to be completed in applying to schools for admittance. Check how difficult each task was for you to do.

	Not at all Difficult	A Little Difficult	Somewhat Difficult	Very Difficult	Extremely Difficult
Getting catalogs/ applications	(9)	( )	( )	( )	( )
Getting letters of recommendation	(4)	(3)	(1)	( )	(1)
Being interviewed	(9)	( )	( )	( )	( )
Getting enough money for application fees	(2)	(4)	(2)	(1)	( )
Taking entrance tests	(6)	(1)	( )	( )	(2)
Filling out application forms	(9)	( )	( )	( )	( )
Writing essay required by applications	(7)	(2)	( )	( )	( )
Filling out financial aid forms	(5)	(3)	(1)	( )	( )
Other:________ specify	( )	( )	( )	( )	( )

24. Many factors influence a person's DECISION TO ENTER a career in allied health. Indicate the influence of each of the factors listed below on your decision to enter an allied health field.

For example, if you have selected a career in allied health because you have always wanted to work in a hospital, then working in a hospital is a strong positive influence on your decision to enter allied health; however, if you have a strong dislike for working in a hospital, then working in a hospital is a strong negative influence on your decision to enter an allied health field.

	Strong Negative Influence	Weak Negative Influence	No Influence	Weak Positive Influence	Strong Positive Influence
Small number of minorities in field	(3)	(1)	(2)	(1)	(2)
Ease of getting a job in allied health field	(2)	( )	(3)	(3)	(1)
Friends also interested in field	(3)	(2)	(3)	(1)	(1)
Advice from a professional in the field	(4)	(1)	(1)	( )	(3)
Job security	(2)	( )	(2)	(1)	(4)
Image of allied health field	(2)	( )	(2)	(1)	(4)
Salaries earned by allied health professionals	(1)	( )	(2)	(2)	(4)
Advice from high school counselors	(4)	( )	(3)	( )	(2)
Other: (SPECIFY) *Advertising*	( )	( )	( )	( )	(1)
Always wanted to be in field	( )	( )	( )	( )	(1)

25. Many factors influence the selection of school(s) or training institution(For each of the items below, indicate its influence on your DECISION TO APPL to the specific school(s) that you did.

	Strong Negative Influence	Weak Negative Influence	No Influence	Weak Positive Influence	Strong Positive Influence
Open enrollment policy	(4)	( )	(2)	( )	(3)
Special programs for minorities	(4)	( )	(2)	(1)	(2)
Accreditation of school programs	(2)	( )	(1)	(2)	(4)
Type of degree or certificate offered	(2)	( )	(1)	(2)	(4)
Cost of program	(1)	( )	(3)	(4)	(1)
Number of minorities already in school	(2)	( )	(4)	(2)	(1)
Grades/class standing required for entrance	(1)	( )	(4)	(1)	(3)
Length of program	(2)	( )	(4)	(1)	(2)
Ability to live at home while attending school	(1)	( )	(1)	(1)	(6)
Image of school	(2)	( )	(2)	(3)	(2)
Friends also applied	(3)	(1)	(3)	(2)	( )
Financial aid available	(2)	(1)	(2)	(1)	(3)
Advice from counselors	(3)	( )	(3)	(1)	(2)
Advice from someone in the field	(4)	( )	(1)	( )	(4)
Other: __________ specify	( )	( )	( )	( )	( )

6. Listed below are a number of problems, barriers or situations that have caused some people to drop out of training. For each of the items, indicate how difficult a problem it is to YOUR STAYING IN SCHOOL.

	Not at all Difficult	A Little Difficult	Somewhat Difficult	Very Difficult	Extremely Difficult	(Blank)
Financial problems	(4)	(3)	(1)	(1)	( )	
Child Care problems	(9)	( )	( )	( )	( )	
Grades	(6)	(2)	( )	( )	( )	
Reactions of teachers to me	(8)	(1)	( )	( )	( )	
Reactions of spouse	(8)	( )	( )	( )	( )	(1)
Social life	(8)	(1)	( )	( )	( )	
Concerned about passing licensing exam	(6)	(2)	(1)	( )	( )	
School does not meet my expectations	(7)	(2)	( )	( )	( )	
Acceptance by classmates	(9)	( )	( )	( )	( )	
Academic preparation	(5)	(2)	(1)	( )	(1)	
Language problems	(6)	(1)	( )	( )	(1)	(1)
Getting along with people in a clinical setting	(7)	(2)	( )	( )	( )	
Lack of help with non-academic problems	(6)	(3)	( )	( )	( )	
Lack of help with academic problems	(7)	(2)	( )	( )	( )	
Other: ______________ specify	( )	( )	( )	( )	( )	

27. For each statement below, decide how much you agree or disagree with it.. Put a check under the column of your choice.

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
Generally speaking, instructors encourage students to stay in school.	(5)	(1)	(3)	( )	( )
Teachers generally don't think I can do as well as I think I can do.	(1)	(1)	(2)	(3)	(2)
Certain jobs within the allied health area are reserved for whites.	(4)	(1)	(2)	(1)	(1)
Generally speaking, instructors have taken personal interest in my work.	(4)	(2)	(2)	( )	(1)
My present career choice gives me a sense of status.	(6)	(2)	(1)	( )	( )
Teachers generally don't think other students can do as well as they think they can do.	(2)	( )	(4)	(2)	(1)
Instructors usually tell students when they are doing a poor job.	(4)	(4)	( )	(1)	( )
My career choice will allow me to get a feeling of doing something worthwhile.	(7)	(1)	( )	(1)	( )

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
Instructors usually tell me when I am doing a poor job.	(2)	(6)	( )	(1)	( )
My instructors have encouraged me to stay in school.	(3)	(2)	(4)	( )	( )
My instructors understand my culture.	(3)	(2)	(3)	( )	(1)
My culture has caused problems for me in school.	(1)	(2)	(1)	(1)	(4)
My classmates understand my culture.	(2)	(3)	(3)	(1)	( )
Discrimination by faculty contributes to high dropout rates among minority students.	(4)	(2)	(2)	( )	(1)
Counselors could do a better job of assisting students if they had more information on available financial resources.	(7)	(1)	(1)	( )	( )
Housing assignments in school facilities are made on a racial basis.	(2)	(3)	(1)	(1)	(2)
Minority group individuals have less chance of being successful regardless of their education.	(4)	( )	(3)	(1)	(1)

	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
. Admissions procedures in my institution are designed to keep the number of minority entrants at a minimum.	(1)	( )	(3)	( )	(5)
My school accepts minority students regardless of academic qualification.	(2)	(2)	(1)	(1)	(3)
. Academic support should not be restricted to minority students.	(3)	(2)	(3)	( )	(1)
. Special academic assistance programs should not be restricted to minority students.	(5)	(1)	(2)	( )	(1)
Schools assume that all minority group students need special academic assistance programs.	(2)	(1)	(2)	(1)	(3)
Allied health institutions discriminate against minority group members in administering financial aid.	( )	(1)	(2)	( )	(6)

28. Rank the following barriers in order of importance, from 1 (highest) to 10 (lowest):

Rank	1	2	3	4	5	6	7	8	9	10	
	3	1	1	-	-	-	-	2	-	2	Racial discrimination
	-	1	1	1	1	1	1	-	2	1	Cultural differences
	2	-	2	2	-	1	1	-	-	1	Information concerning allied health
	-	-	1	2	3	1	-	1	1	-	Geographic location
	-	2	3	-	1	1	1	-	-	1	Financial status
	1	-	-	1	-	-	2	2	2	1	Length of program
	-	2	-	-	-	2	2	1	1	-	Admissions criteria and procedures
	1	-	-	1	2	1	1	-	2	1	Not knowing anyone in the field
	2	-	1	2	1	1	1	1	-	-	Academic preparation
	-	3	-	-	1	1	-	1	1	2	Student-faculty relationship

MOST FREQUENTLY USED WORDS IN CATEGORIES OF FACULTY AND STUDENT GROUPS

(3-FACTOR SOLUTION)

FACTOR 1

CATEGORY	FACULTY	STUDENTS
SUB	Minority	Minority
SHRP	Certain, cut, particular, specific, point, delineate, sure	Cut, definite, point, certain, exact
POWR	Able, skill, excellence, ability, faculty, graduate, prestige, genius, scholar, qualify	Excellence, art, faculty, scholar, diploma, graduate
PAST	Already, tradition, once, ago	Ago, once, already, remember, old
NEW	New, today, now	New, now
MUCH	Enough, often, lot, many, more, most, probability, expensive, sufficient	Lot, enough, many, probability, more, much, most
MONY	Budget, money, cost, spend, dollar, expensive, finance, tuition	Finance, dollar, money, pay, cost, quarter, spend, salary
LACK	Lose, vacancy, need, spend	Lose, spend, lack, need
JOIN	Between, associate, feel, meet, involve, attend, member, mix, recruit, participate, union, interview	Appointment, involve, feel, recruit, affiliate, meet
GRUP	Class, racism, community, type, minority, department, people	Class, racism, community, society, department, family, group, public, minority, social, people, type
FORM	Level, plan, made, technique, program, structure, make	Make, policy, program, club, technique, system, plan, figure
EVNT	Experience, practice, happen, situation, state	Happen, situation, state

CATEGORY	FACULTY	STUDENTS
END	Complete, end, goal	Complete, finish, final, end, goal
BLUR	Difficult, confuse, guess, problem, question, impossible	Guess, wonder, problem, confuse, mess, question
BLOK	Barrier, ghetto, exclusive, difficult, door, impossible	Door, difficult, barrier, curfew, interrupt, stop
SOMA	Biology, blood, histology	Anatomy, biology, physics, physiology
REST	Sit, rest, stay, sleep	Sit, wait, stay
MTRL	Chemist, material	Chemist, dynamite, paper, stuff
LEAD	Coordinate, teacher, government, guidance, professor, administration, director, discipline, judge, presidency	Boss, guidance, professor, supervise, teacher, parent, government, instructor, officer, dean

FACTOR 2

UP	Up, high, over	Up, high, over
TRUE	Fact, actual, real, realize, really, test, science, correct, true, valid	Really, test, science, actu fact
SHRP	Certain, cut, particular, point, sure, specific, delineate	Cut, definite, point, certain, exact
SEP	Division, private, leave, cut, exclude, off, break, vacancy, deal	Away, cut, leave, alone, deal, off, private
GRUP	Class, associate, community, department, minority, people, racism, type	Class, society, community, family, department, public, group, social, minority, type, people, racism
EMPH	Even, definitely, really, absolute, too, very	Especially, fairly, even, pretty, really, too, very

CATEGORY	FACULTY	STUDENTS
CRUX	Importance, necessity, basic, evaluate, qualify, necessary, quality	Basic, importance, quality, main, special, matter
COLR	Black, white	Black, white
OUT	Out, outside	Out, outside
KIN	Wife, family	Brother, parent, son, mother, cousin, family, wife
IDEA	Because, discriminate, counsel, guess, know, mean, program, information, science, culture, think, understand, why	Anatomy, study, because, advise, biology, orientate, chemist, examination, counsel, subject, know, suppose, program, science, think, why
HOME	Campus, college, highschool, hospital, school, university	College, highschool, hospital, school, university, (home), (office)
FLOW	Drop, river, stream	Drop

FACTOR 3

VIEW	Aspect, regard, bright, see, exposure, seem, look, stigma, read	Look, read, see, television, seem, movies, pictures, film
HAVE	Get, got, take, took	Get, take, took
FALS	Artificial, bigot, wrong, bias	Cheat, prejudice, wrong
CRIM	.00	Cheat
ANML	Kid	Kid
WORK	Career, profession, work, salary, job, employee	Career, employee, job, salary, profession, work
SOME	Few, some, maybe, possibly, percent, perhaps, department	Department, chapter, half, some, maybe, possibility, part, sometimes, several, percent

CATEGORY	FACULTY	STUDENTS
OPPO	But, oppose, against, other, different, unless, else, discriminate, difference, instead	But, compete, different, discriminate, else, differen other, though
JOIN	Between, associate, feel, meet, involve, attend, member, associate, recruit, mix, union, participate, interview, mixture	Appointment, involve, feel, recruit, affiliate, meet
AID	Aid, advise, provide, counsel, support, encourage, assist, give, avail, grant, loan, land, opportunity, offer, volunteer, prepare, health, guidance, grant	Advise, offer, counsel, kind guidance, opportunity, depe advantage, give, prepare, aid, help
AGRE	Agree, commit, allow, license, let, willing, ok, believe, yes, accept	Believe, accept, credit, let, recommend, yes, willing

MOST FREQUENTLY USED WORDS IN CATEGORIES OF FACULTY AND STUDENT GROUPS

(7-FACTOR SOLUTION)*

FACTOR 1

CATEGORY	FACULTY	STUDENTS
EDUC	Academic, campus, college, course, highschool, educate, school, student, teacher, degree	Academic, campus, college, course, highschool, educate, school, student, teacher, degree
OPEN	Door, examination, exposure, find, found	Door, examination, find, found
FACTOR 2		
TRUE	Fact, actual, really, test, science	Really, actual, test, fact, science
EMPH	Really, very, even, oh, too	Pretty, oh, really, too, very
COLR	Black, white	Black, white
OUT	Out, outside	Out
KIN	Wife, mother, aunt, family, marry	Cousin, mother, parent, sister
HOME	Campus, highschool, college, hospital, university, school	College, room, highschool, school, office, hospital
FLOW	Drop, river, stream	Drop
FACTOR 3		
FOND	Pleasant, friend	Friend, girlfriend
WORK	Career, profession, job, work, salary	Salary, job, career, work
WHOL	All, community, complete, absolute, whole, general	All, community, human, everything, general, complete, everybody, whole, uniform

CATEGORY	FACULTY	STUDENTS
PLAC	City, area, english, place, right, orient	City, right, area, anywhere english, somewhere
LARG	Tremendous, large, big, develop, increase	Big, large
BGIN	Begin, cause, establish, start, original	Original, introduce, start, establishment, create

FACTOR 4

CATEGORY	FACULTY	STUDENTS
YNG	Kid, girl	Girl, children, kid, child
VARY	Grade, change, develop	Around, rough, grade, chang develop
PATH	Grade, course, way	Grade, north, way, south
FALS	Artificial, bias, wrong, bigot	Cheat, prejudice, wrong
DOWN	Down, low, lower, under	Down, fall, under, low
CRIM		Cheat
ANML	Kid	Kid
SIML	Again, again, also, same, level, uniform, like, type	Again, same, like, also, apply, type
BACK	Back, background, after, recrease, follow	After, back, background

FACTOR 5

CATEGORY	FACULTY	STUDENTS
WE	I, my, we, one, our	I, my, we, one, our
SOLE	I, me, person, only	I, me, person, only
NEW	New, today, now	New, now

CATEGORY	FACULTY	STUDENTS
IDEA	Because, why, counsel, discriminate, know, guess, program, mean, science, information, think, culture, understand	Anatomy, study, because, advise, biology, examination, chemist, subject, counsel, suppose, know, science, program, why
BODY	Feel, right	Hand, right, feet, cadaver
GOOD	Excellence, better, kind, select, good, culture, well, fair	Excellence, good, kind, well, best, culture, better

FACTOR 6

HAVE	Get, take, took	Get, take, got, took
MOTV	Interest, try, motivate, want, need, applicant, require, responsibility, volunteer	Attention, attitude, care, concern, chance, hope, prejudice, interest, need, try
OPPO	But, other, different, unless, else, discriminate	But, though, different, else, other, otherwise
NO	Not, no, never	No, never, not

FACTOR 7

PANG	Trouble, concern, bother, disapprove, baring, sorry	Afraid, concern, trouble, worry
MALE	Man, male, guy	Brother, son, guy
FORM	Before, toward, first, progress, predict, rank	Ahead, advance, before, future, first, rank
BACK	Back, background, after, reverse, follow	After, behind, back, background

CATEGORY	FACULTY	STUDENTS
PLAY	Play, deal, game	Play, deal, game
MONY	Budget, money, cost, salary, dollar, spend, finance, expensive, tuition, income	Finance, salary, tuition, quarter, money, dollar, pay
MART	Finance	Finance, commercial, office, business

* Words in categories that appear in the 3-factor solution have been omitted from the factors in this solution.